Minnesota
Workplace Safety Report
Occupational Injuries and Illnesses, 2003

Research and Statistics
Minnesota Department of Labor and Industry

Minnesota Workplace Safety Report:
Occupational Injuries and Illnesses, 2003

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Executive summary

Minnesota's workplaces became safer for workers during 2003. The latest occupational injury and illness figures show there were an estimated 111,600 recordable injury and illness cases in 2003; about 29,900 cases involved one or more days away from work. The comparable figures for 2002 were 120,500 total cases and 33,500 days-away-from-work cases. There were 72 work-related fatalities in 2003, down from 81 fatalities in 2002.

Though down from previous years, these injuries, illnesses and deaths exact a toll on workers and their families and also affect business costs and productivity. Workers' compensation costs in Minnesota approached $1.5 billion in 2003. In 2002 (the most current data available), the average cost of an insured claim was more than $6,500. There are myriad other costs of workplace injuries and illnesses that are more difficult to measure, such as delayed production, hiring and training of new workers, pain and suffering, and those economic and non-economic losses to injured workers and their families that are not covered by workers' compensation.

This report, part of an annual series, gives information about Minnesota's job-related injuries, illnesses and fatalities. Data sources are the *Survey of Occupational Injuries and Illnesses* and the *Census of Fatal Occupational Injuries,* both conducted by the U.S. Bureau of Labor Statistics. ***Because the Occupational Safety and Health Administration changed its injury and illness recordkeeping requirements in 2002 and the Bureau of Labor Statistics changed its industry and occupation classification systems for the 2003 survey, the data for 2002 and 2003 are not comparable with data for prior years.***

Nonfatal occupational injuries and illnesses

Incidence rates

- Minnesota's total rate of workplace injuries and illnesses was 5.5 cases per 100 full-time-equivalent (FTE) workers in 2003. This represents an 8 percent decrease from the 2002 rate of 6.0 cases.

- The rate of cases with days away from work, job transfer or restrictions was 2.8 cases per 100 FTE workers in 2003, a 10 percent decrease from the 2002 rate of 3.1 cases.

- The rate of cases with days away from work (the most severely injured workers) was 1.5 per 100 FTE workers in 2003, a 12 percent decrease from the 2002 rate of 1.7 cases.

- Minnesota's private sector total case rate and lost-workday case rates have been significantly above the U.S. rates since 1996. For the private sector in 2003, the total case rate was 5.5 for the state versus 5.0 for the nation.

- Minnesota's rate of cases with days away from work has been roughly equal to the national rate since 1996; in 2003, Minnesota's rate was 1.4 cases and the U.S. rate was 1.5 cases.

- Minnesota's industry sectors with the highest total injury and illness rates per 100 FTE workers were:

  (1) construction (9.3);
  (2) agriculture, forestry, fishing and hunting (8.8); and,
  (3) manufacturing (7.5).

- Four of the 10 industry subsectors with the highest total case rates were in manufacturing and three were in healthcare and social assistance. These industries accounted for 16 percent of the recordable cases.

- The industry subsectors with the highest numbers of cases with days away from work were specialty trade contractors (1,830 cases) and hospitals (1,790 cases). The top 10 industry groups accounted for 11,540 days-away-from-work cases, 39 percent of the total.

Worker and injury characteristics

For cases with days away from work, the survey provides information about demographic characteristics of the injured workers and the characteristics of their injuries. The following results refer to injuries and illnesses occurring in 2003.

- Men accounted for 61 percent of the injured workers.

- Workers age 35 to 44 were the most common age group, accounting for 29 percent of the cases.

- The occupation group with the most days-away-from-work cases was service workers, with 22 percent of the cases. The two most common specific occupations were nursing aides, orderlies and attendants and laborers, freight, stock and material movers.

- The most common types of injury were:

  (1) sprains, strains and tears of muscles, joints and tendons (45 percent); and
  (2) soreness and pain (10 percent).

- The most common body parts affected were:

  (1) upper extremities (27 percent);
  (2) the back (26 percent); and
  (3) lower extremities (20 percent).

- The most frequent events or exposures leading to the injury or illness were:

  (1) overexertion (31 percent); and
  (2) falls (16 percent).

- Repetitive motion accounted for 4 percent of the cases.

- The most frequent sources of injury or illness were:

  (1) the injured worker's bodily motion or position (17 percent); and
  (2) floors and ground surfaces (15 percent).

Fatal occupational injuries

The nationwide *Census of Fatal Occupational Injuries* covers all fatal work injuries in the private and public sectors regardless of program coverage; thus, it includes federal workers and self-employed workers along with all others. However, fatal *illnesses* (such as asbestosis) are excluded.

- In 2003, 72 Minnesotans were fatally injured on the job. For 1999 through 2003, Minnesota had an average of 74 fatal work injuries a year, consisting of approximately 57 wage-and-salary workers and 17 self-employed people.

- Among industry sectors, the highest total numbers of fatal injuries a year for 2003 were in:

  (1) agriculture, forestry and fishing (19);
  (2) construction (10); and
  (3) transportation and warehousing (10).

- The most frequent causes of Minnesota's fatal work injuries for 2003 were:

  (1) transportation accidents (25 percent);
  (2) struck by a falling object (15 percent); and
  (3) falls to a lower level (13 percent).

Contents

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Introduction

Minnesota's workplaces became safer for workers during 2003. The latest occupational injury and illness figures show that during 2003, there were an estimated 111,600 recordable injury and illness cases; about 29,900 cases involved one or more days away from work. The comparable figures for 2002 were 120,500 total cases and 33,500 days-away-from-work cases. There were 72 work-related fatalities in 2003, down from 81 fatalities in 2002.

About 310 Minnesota workers were hurt at work or became ill from job-related causes each day during 2003. These injuries, illnesses and deaths exact a toll on workers and their families; they also affect business costs and productivity.

- Workers' compensation in Minnesota cost an estimated $1.46 billion in 2003, or $1.74 per $100 of covered payroll. This includes indemnity benefits (for lost wages, functional impairment or death), medical treatment, rehabilitation, litigation, claims administration and other system costs.

- In 2002 (the most current data available), the average cost of an insured claim was $6,530 (in 2003 dollars) for medical treatment plus indemnity benefits (indemnity benefits are paid in 21 percent of all cases).

- For those claims with indemnity benefits, the average medical and indemnity cost was much higher — $28,200.

- Other workplace injury and illness costs are more difficult to measure, such as delayed production, hiring and training of new workers, pain and suffering, and those economic and non-economic losses to injured workers and their families that are not covered by workers' compensation.

This report is part of an annual series. It gives information, through 2003, about Minnesota's job-related injuries, illnesses and fatalities: their incidence, nature and causes; the industries in which they occur; and changes in their incidence over time. This information is important for improving the safety and health of Minnesota's workplaces and, thereby, reducing the burden of occupational injuries and illnesses on workers, families and employers.

This report also provides a summary of Minnesota OSHA activities, showing how these state government programs are supporting employers efforts to improve workplace safety.

Data sources

This report presents data from three sources: the U.S. Bureau of Labor Statistics (BLS) annual *Survey of Occupational Injuries and Illnesses*; the BLS annual *Census of Fatal Occupational Injuries* (CFOI); and the OSHA Integrated Management Information System (IMIS). The BLS and CFOI data are available through 2003, and the IMIS data is available through September 2004 (the end of the 2004 federal fiscal year).

BLS survey

The BLS survey, conducted jointly by the BLS and state agencies, is the primary source of workplace injury and illness data nationwide. Approximately 4,900 Minnesota employers in the private sector and in state and local government participated in the 2003 survey. The survey includes all cases recorded on the Occupational Safety and Health Administration (OSHA) log, on which employers with 11 or more employees are required to record workplace injuries and illnesses. Employers with 10 or fewer employees that participate in the survey also record their cases on the OSHA log for the survey year. The survey data is collected from the log and from an additional set of questions regarding cases with at least one day off the job.

While the BLS survey provides the most complete, standardized set of data regarding

workplace injuries and illnesses, the number of recordable cases from the survey is not an estimate of all workplace injuries and illnesses. The BLS survey does not include injuries to employers, sole proprietors, federal government employees, volunteers and family farm workers.

OSHA-recordable cases include: all work-related fatalities; nonfatal occupational illnesses; nonfatal occupational injuries that result in loss of consciousness; injuries requiring medical treatment other than first aid; and any injury resulting in lost time from work, restricted work activity or transfer to another job after the day of injury. An injury or illness is considered work-related if an event or exposure in the work environment caused or contributed to the condition or significantly aggravated a pre-existing condition.

Because of changes in the OSHA recordkeeping requirements, ***the data for 2002 and 2003 are not comparable with data for prior years.*** The recordkeeping changes affected what injuries and illness are recordable, how injuries and illnesses are categorized and how days away from work are counted. These changes make direct comparisons between the pre-2002 and 2002 and later results unreliable. The 2002 OSHA recordkeeping changes are discussed in more detail in Appendix A.

Further changes in the categorization of industries and occupations took place in 2003. The industry coding changed from the 1997 Standard Industrial Classification (SIC) system to the 2002 North American Industry Classification System (NAICS).[1] Occupational coding changed from the 1990 Bureau of Census codes to the 2000 Standard Occupational Classification (SOC) system.[2] Exact comparisons of 2003 industry- and occupation-specific rates and numbers with results for earlier years, even 2002, are not possible.

The survey defines different types of cases according to whether they have days off the job, job transfer or work restrictions. Because of changes in OSHA recordkeeping requirements, these definitions are slightly different than the definitions from previous years.

- Cases with days away from work, job transfer or restriction (DART), as a combined group, are those cases with days when the injured worker is off the job *or* working with restrictions. Prior to 2002, cases with days away from work or job restrictions were called lost-workday cases. DART cases consist of:

  (1) days-away-from-work (DAFW) cases — those with any days off the job other than the day of injury or illness (with or without additional days of restricted work or job transfer); and
  (2) cases with job transfer or restriction — those with job transfer or restricted work but no days off beyond the initial day of the injury or illness.

- Other recordable cases are cases with no days away from work, no job transfer and no work restrictions beyond the initial day of the injury or illness, but which meet the guidelines for recording the case.

These case types and other terms used in the BLS survey and the case types for previous years are more precisely defined in Appendix C.

An important issue with the BLS survey data is sampling error, the random error in survey statistics that occurs because the statistics are estimated from a sample. This sampling error is greater for smaller categories, such as particular industries, because of smaller sample size. In reports for 2001 and earlier years, industry-specific incidence rates were averaged over three years to reduce sampling errors. However, because of the recordkeeping and categorization changes, it is not possible to average 2003 results with those of earlier years.

Fatal injuries

The BLS, in cooperation with state and other federal agencies, conducts the nationwide *Census of Fatal Occupational Injuries* (CFOI). The CFOI program was developed to produce accurate, comprehensive, descriptive, timely and accessible counts of fatal workplace injuries that occur during a given year. Fatalities caused by illnesses are excluded.

[1] A listing of NAICS supersectors, sectors and subsectors is provided in Appendix B. Information about NAICS is available at www.census.gov/epcd/www/naics.html.
[2] Information about the SOC system is available at www.bls.gov/soc/home.htm.

The CFOI provides a complete count of fatal work injuries by using multiple sources to identify, verify and profile these incidents. Source documents such as death certificates, workers' compensation reports, and federal and state agency administrative records are cross-referenced to gather key information about each workplace fatality. Two or more independent source documents are used to verify the work relationship of each fatal work injury.

The CFOI results were categorized by NAICS industry codes and SOC occupation codes for the first time in 2003. Trends and direct comparisons with data from earlier years are not possible for industries and occupations.

OSHA activity measures

The Minnesota Occupational Safety and Health Administration (MNOSHA) program includes the Occupational Safety and Health Compliance unit, which is responsible for compliance program administration, and the Workplace Safety Consultation unit, which provides free consultation services. Source statistics used in this report come from MNOSHA's Integrated Management Information System (IMIS), used by federal and state OSHA management to produce statistics regarding their programs.

More data available

The BLS survey provides a large volume of information for the United States and most individual states. This information includes the number and incidence of injuries and illnesses by industry and establishment size. For DAFW cases, the survey provides data about the characteristics of injuries and illnesses, how they occur, severity (number of days away from work), length of time on the job when injured, occupation and worker characteristics.

The Minnesota case counts and incidence rates for all publishable industries for survey years 1999 through 2003 are available on the DLI Web site at www.doli.state.mn.us/dlistats.html. Appendix D shows the publishable industries for 2003. Many other BLS survey data tables and charts for Minnesota are available at www.doli.state.mn.us/blsstats.htm.

The Minnesota CFOI tables are on the Web at www.doli.state.mn.us/dlistats.html. The national BLS survey and CFOI statistics are available at www.bls.gov/iif. The national data, because of larger sample sizes, includes more detailed categories than the state data and produces smaller sampling errors. The BLS Web site also provides data for other states.

Some IMIS OSHA Compliance inspection data, accident investigation summaries and lists of frequently cited standards by industry are available at www.osha.gov/oshstats.

The MNOSHA annual report provides more-detailed statistics about MNOSHA activities than are presented in this report and is available at www.doli.state.mn.us/pdf/osha2003report.pdf.

Report organization

The next three chapters in this report describe the incidence and characteristics of occupational injuries and illnesses in Minnesota. Chapter 2 presents data about the number and incidence of Minnesota's workplace injuries and illnesses over time, focusing on the state as a whole. Chapter 3 provides statewide injury and illness statistics about industry and establishment size. Chapter 4 shows the characteristics of workers and their injuries for cases with days away from work.

Chapter 5 gives information about the state's fatal workplace injuries, using data from the CFOI program. Figures show the number of fatalities, the events causing the fatalities and characteristics of the fatally injured workers.

Chapter 6 provides information about MNOSHA compliance activities and consultation programs to help employers achieve safe and healthful workplaces.

Appendix A addresses the changes made to the OSHA recordkeeping requirements for 2002. Appendix B shows the structure of the NAICS industry categorization. Appendix C provides a glossary of concepts and terms for understanding and using the BLS survey data. Appendix D shows the Minnesota case rates and number of cases for each industry with publishable results from the 2003 BLS survey.

2

Number and incidence of workplace injuries and illnesses

Number of injury and illness cases

While incidence rates provide standardized measurements of injuries and illnesses, the number of cases shows the magnitude of the occupational injury and illness situation, and is an appropriate point for beginning this report.

On the basis of employers' responses to the *Survey of Occupational Injuries and Illnesses*, there were an estimated 111,600 recordable injury and illness cases in Minnesota in 2003. This number is greater than the labor force in all but five of Minnesota's 87 counties.

Figure 2.1 shows estimates of the number of nonfatal injuries and illnesses in Minnesota for 1992 through 2003. The estimates are based on data collected for the BLS survey and are not the same as the number of workers' compensation claims. Because of the OSHA recordkeeping changes, the 2002 and 2003 estimates are not directly comparable with estimates from earlier years. To highlight this caveat, there is a break in the data lines after 2001.

- From 1992 to 2003, while employment increased 22 percent, the total number of recordable cases decreased 19 percent.
- The distribution of cases among the various case types in 2003 was consistent with the distribution in recent years.

Incidence rate trends

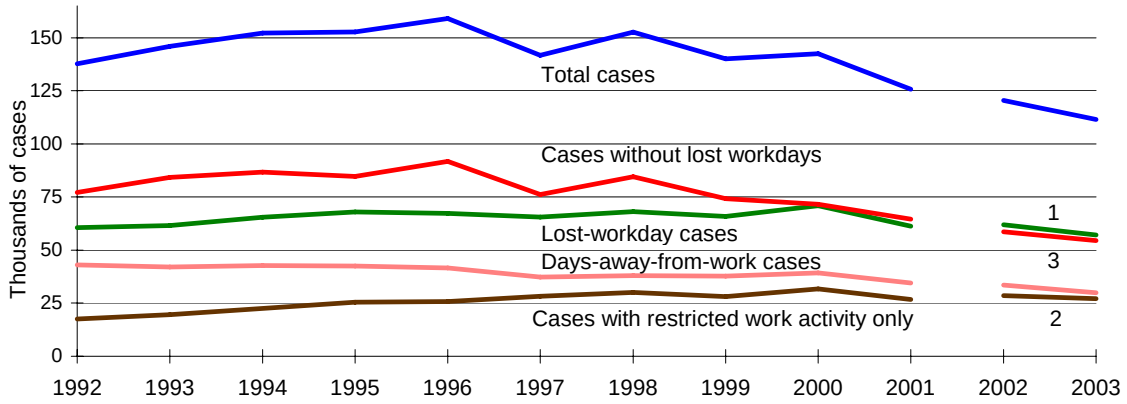
The incidence rates are statewide estimates based on the number of recordable injury and illness cases and the total hours of work reported by the employers participating in the survey. Figure 2.2 shows estimates of the incidence of nonfatal injuries and illnesses for Minnesota for 1992 through 2003, expressed as cases per 100 full-time-equivalent (FTE) workers. All sectors, private and public, are included.

Because of the OSHA recordkeeping changes, the 2002 and 2003 estimates are not directly comparable with estimates from earlier years. Like Figure 2.1, the 2002 and 2003 data points in Figure 2.2 are not connected to the earlier years to remind readers that the estimates are not directly comparable. However, analysis of the past two years' statistics indicates that the recordkeeping changes did not have a large effect on the overall survey results.

- The total case incidence rate started dropping in 1997. Minnesota's 2003 total case rate and DART case rate were the lowest in the history of the state survey.
- The DAFW case rate declined throughout this period, reaching its lowest level in 2003. In contrast, the rate for restricted-work-activity-only cases increased through 1995, and has remained relatively level since then.
- These changes in the injury and illness rates over the entire time period are the result of many factors, including improvements in workplace safety and health, changes in the mix of industries, decreases in case severity, changes in what happens after an injury or illness occurs and changes in reporting.[3]
- A major reason for the recent drop in the incidence rates was the shift in employment among industries, especially the drop in manufacturing employment. Manufacturing lost of 51,000 jobs, a 13 percent decrease, from 2000 to 2003. There were likely thousands of fewer injuries, although they cannot be accurately estimated because of the recordkeeping changes and the switch from SIC to NAICS codes.

[3] See David R. Anderson, "Why did the claim rate fall in the 1990s?" *COMPACT*, August 2002 (www.doli.state.mn.us/pdf/aug02-3.pdf); and Hugh Conway and Jens Svenson, "Occupational injury and illness rates, 1992-96: Why they fell," *Monthly Labor Review*, November 1998.

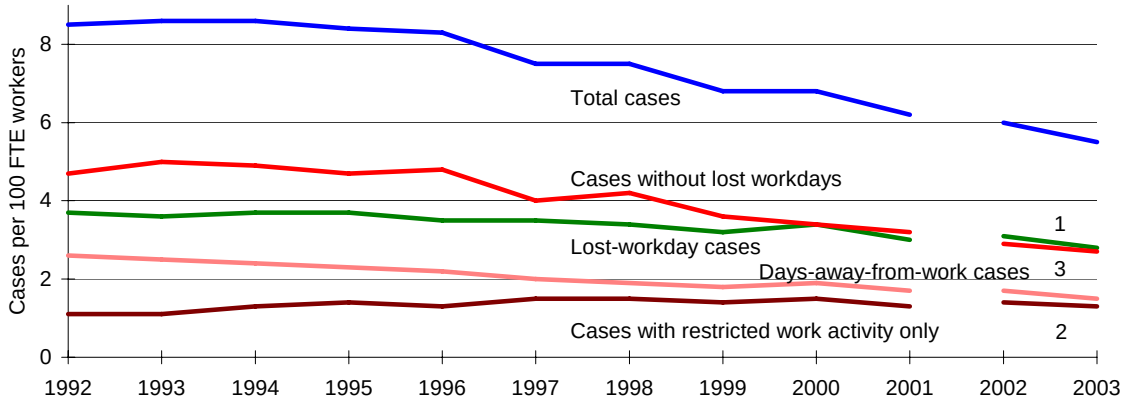
Figure 2.1 Number of injury and illness cases, Minnesota, 1992-2003



Year of injury	Employ-ment (1,000s)	Total cases (1,000s)	Lost-workday cases[1]		Days-away-from-work cases		Cases with restricted work activity only[2]		Cases without lost workdays[3]	
			Number (1,000s)	Pctg. of total	Number (1,000s)	Pctg. of total	Number (1,000s)	Pctg. of total	Number (1,000s)	Pctg. of total
1992	2,082	137.7	60.6	44%	43.0	31%	17.6	13%	77.1	56%
1996	2,329	159.0	67.3	42%	41.6	26%	25.7	16%	91.7	58%
2001	2,576	125.8	61.3	49%	34.5	27%	26.8	21%	64.6	51%
2002	2,551	120.5	62.0	51%	33.5	28%	28.5	24%	58.6	49%
2003	2,540	111.6	57.1	51%	29.9	27%	27.2	24%	54.5	49%

1. For 2002 and later, cases with days away from work, job transfer, or restriction (DART).
2. For 2002 and later, cases with job transfer or restriction.
3. For 2002 and later, other recordable cases.

Figure 2.2 Injury and illness case incidence rates, Minnesota, 1992-2003



	Total cases per 100 FTE workers	Total lost-workday cases[1]	Days-away-from-work cases	Cases with restricted work activity only[2]	Cases without lost workdays[3]
1992	8.5	3.7	2.6	1.1	4.7
1996	8.3	3.5	2.2	1.3	4.8
2001	6.2	3.0	1.7	1.3	3.2
2002	6.0	3.1	1.7	1.4	2.9
2003	5.5	2.8	1.5	1.3	2.7

1. For 2002 and later, cases with days away from work, job transfer, or restriction (DART).
2. For 2002 and later, cases with job transfer or restriction.
3. For 2002 and later, other recordable cases.

The decline in manufacturing employment is one indicator of the economic slowdown that occurred in 2001. The possible effects of the recession on injury and illness rates and workers' compensation claims reporting is discussed in the *Minnesota Workers' Compensation System Report, 2001*.[4] Injury rates are likely to decrease during economic slowdowns because of slower production and fewer inexperienced workers.

Comparing Minnesota with the nation

Figure 2.3 compares the rates of total cases, DART cases and DAFW cases in the private sector for Minnesota and the United States for 1992 through 2003.[5]

- Minnesota's 2003 total rate was 5.5 per 100 FTE workers, while the U.S. rate was 5.0 cases. Minnesota's total case rate was below the national rate from 1985 to 1992, but has been above the U.S. rate since 1993. The total case rate has been significantly higher than the U.S. rate since 1996.

- Minnesota's DART rate for 2003 was 2.8, compared to 2.6 for the nation. Minnesota's lost workday case rate was lower than the U.S. rate in the late 1980s, about the same as the U.S. rate during the early 1990s, and higher than the national rate beginning in 1996. This difference was statistically significant from 1996 to 2002, but was within the measurement error for 2003.

- In 2003, Minnesota's DAFW rate fell below the national rate. Since 1996, the DAFW case rates of Minnesota and the United States have not been significantly different.

Variations in the industry mix among Minnesota and other states lead to some differences in the overall rates. For example, Minnesota has a higher proportion of total employment in health services than do many other states. It is also possible that Minnesota has a different distribution of injury severity than most other states.

Some of the difference between the Minnesota and U.S. total recordable case rates and DART rates may be due to OSHA log recordkeeping. Employers might not strictly adhere to the OSHA recordkeeping requirements for cases that do not result in days away from work and for cases that are not covered by workers' compensation insurance.

If employers in Minnesota maintained more complete OSHA logs than employers in other states, the Minnesota rate would be higher than the national rate, especially for cases without days away from work. Additionally, there would be less difference for the most serious cases.

The incidence rate data support this hypothesis. For the 1995 to 2002 period, Minnesota's rate for cases *without* days away from work stayed at least 0.5 cases per 100 FTE workers above the national rate, while the DAFW rate was not significantly different from the U.S. rate.

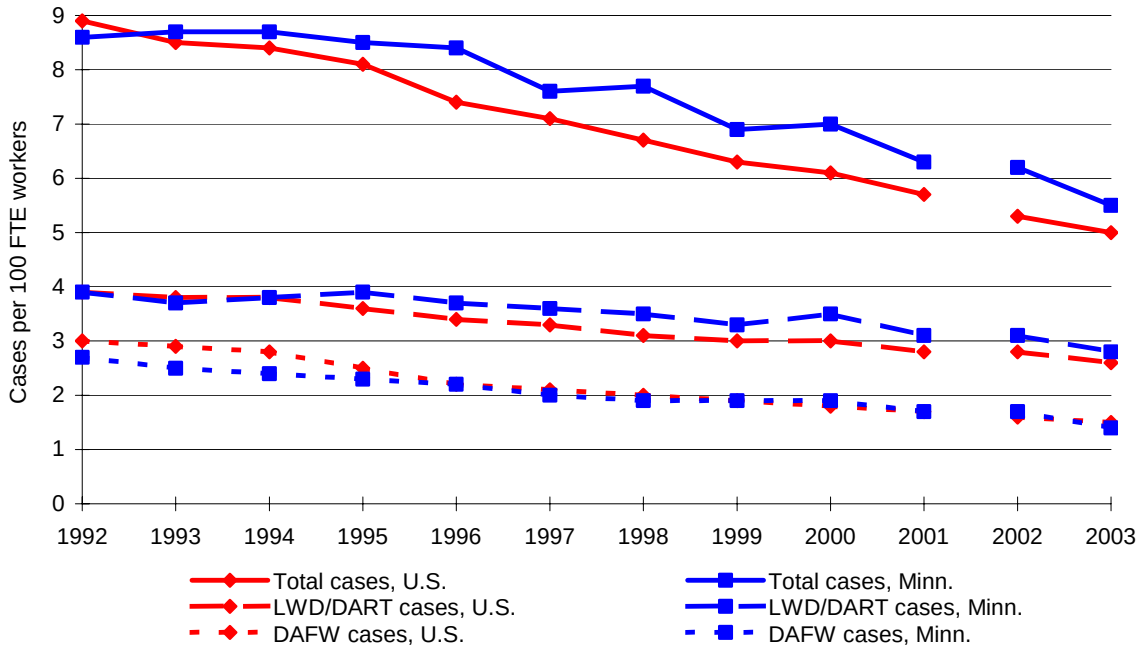
Workers' compensation claims data provides some corroborating evidence that Minnesota's national ranking improves with increasing case severity. Using workers' compensation insurer data provided to rating bureaus,[6] Minnesota's rate of total workers' compensation cases per 100,000 workers averaged 9 percent above the national rate for the 1996 to 2000 period. However, for cases with permanent partial disability, Minnesota's rate was only 74 percent of the national rate.

[4] The report is available at www.doli.state.mn.us/pdf/wcfact01.pdf. The recession is discussed on pages 4, 14 and 27. See also David R. Anderson, "Will the recession affect work comp costs?" *Research Reporter*, May 2002 (www.doli.state.mn.us/rr02may1.htm).

[5] In the BLS survey, participating states have the option to survey public-sector worksites. Because not all states choose this option, public-sector statistics are not available at the national level.

[6] Florence Blum and John F. Burton, Jr., "Workers' compensation benefits: Frequencies and amounts 1995-1999," *Workers' Compensation Policy Review*, vol. 3, issue 6, November/December 2003; and "Workers' compensation benefits: Frequencies and amounts 1995-2000," *Workers' Compensation Policy Review*, vol. 4, issue 5, September/October 2004. Permanent partial disability cases include all indemnity cases paid benefits for more than one year

Figure 2.3 Injury and illness case incidence rates for Minnesota and the United States, private sector, 1992-2003



	Cases per 100 full-time-equivalent workers					
	Total cases		LWD cases (1992-2001) DART cases (2002-2003)[1]		Days-away-from-work cases	
	Minnesota	United States	Minnesota	United States	Minnesota	United States
1992	8.6	8.9	3.9	3.9	2.7	3.0
1996	8.4	7.4	3.7	3.4	2.2	2.2
2001	6.3	5.7	3.1	2.8	1.7	1.7
2002	6.2	5.3	3.1	2.8	1.7	1.6
2003	5.5	5.0	2.8	2.6	1.4	1.5

1. LWD cases are lost workday cases. DART cases are cases with days away from work, job transfer, or restriction.

Minnesota relative to other states

It is possible to compare Minnesota's relative rate levels with those from other states to get a general idea of the current level and recent trend in Minnesota's injuries and illnesses.

Figure 2.4 shows Minnesota's ranking on five injury and illness rates and on two rate ratios. Comparable private sector data is available for 40 other states. Lower rates result in lower ranks.

The results of this analysis reinforce the comparison of Minnesota and the national rates:

Minnesota's results improve as case severity increases and Minnesota's rates have been decreasing faster than the national rates.

- Minnesota had the 24th lowest total case rate in 2003, an improvement from the 2000 rank of 28th lowest. The lowest total case rate was 3.1 in New York; the highest rate was 7.7 cases in Maine.

- Minnesota had the 22nd lowest DART rate in 2003, an improvement from the 2000 rank of 29th lowest. The lowest DART case rate was 1.6 in Louisiana; the highest rate was 4.1 cases in Maine.

- Minnesota had the 18th lowest DAFW rate in 2003, an improvement from the 2000 rank of 25th lowest. The lowest DAFW case rate was 1.0 in Louisiana; the highest rate was 2.9 cases in Hawaii.

- Minnesota had the 33rd lowest rate of cases with job transfers or restrictions in 2003, similar to its 2000 ranking of 34th lowest. It is not necessarily good to have a very low rate, because this is a measure that indicates employers' ability to provide job accommodations for injured workers. New York had the lowest rate, at 0.2, one-seventh Minnesota's rate.

- Minnesota had the 25th lowest rate for other recordable cases, cases that do not require time away from work or any work restrictions. This rank was unchanged from 2000. Once again, New York had the lowest rate on this measure, at 1.3, less than half the rate of Minnesota.

- Total cases can be divided into two broad categories, DART cases and other recordable cases. A low percentage of DART cases among all cases may indicate that employers are recording many low-severity cases on their OSHA logs or that the state has a low overall severity level. DART cases comprised 51 percent of Minnesota's recordable cases in 2003, the 18th lowest percentage. This is a large improvement from 2000, when Minnesota ranked 28th lowest. The lowest state was Utah with 43 percent.

- DART cases can be divided into DAFW and cases with job transfer or restriction. A low percentage of DAFW cases among DART cases may signal that employers are making work accommodations generally available to injured workers, reducing their losses (and the workers' losses) from work-related injuries and illnesses. Minnesota had the 8th lowest DAFW percentage among DART cases in 2003, at 50 percent. Indiana had the lowest percentage (44 percent), while New York had the highest percentage (90 percent).

Figure 2.4 Minnesota's injury and illness rates compared with 40 other states (lower rates have lower rankings)

Incidence rate	Ranking 2000	Ranking 2003
Total cases	28	24
Cases with days away from work, job transfer, or restriction (DART)[1]	29	22
Cases with days away from work (DAFW)	25	18
Cases with job transfer or restriction[2]	34	33
Other recordable cases	25	25
DART (or LW) as percentage of total	28	18
DAFW as percentage of DART (or LW)	10	8

[1] For 2000, lost workday cases (LW).

[2] For 2000, cases with days of restricted work activity only.

3

An overview of nonfatal workplace injuries and illnesses in Minnesota

This chapter compares the injury and illness rates by industry and presents information about the incidence rates for different sizes of establishments. There is considerable variation in the injury and illness rates by industry and establishment size.

The 2003 injury and illness survey shows:

- construction had the highest total injury and illness rate, 9.3 cases per 100 FTE workers, followed by manufacturing with a rate of 7.5 cases.

- establishments with 50 to 249 employees had the highest incidence rates, while establishments with 10 or fewer employees had the lowest rates.

Incidence by industry division

Industries can be analyzed at different levels of detail. The *Survey of Occupational Injuries and Illnesses* uses the North American Industrial Classification System (NAICS) to categorize industries. This is the first year that survey results have been published using the NAICS system. Previous survey data was collected and categorized according to the Standard Industrial Classification (SIC) system. NAICS was established through a cooperative effort by the United States, Canada and Mexico and is used for industry-based economic statistics. NAICS groups establishments into industries based on the activities in which they are primarily engaged.

As shown in Appendix B, there are 20 industry sectors in the NAICS classification. NAICS uses a six-digit hierarchical code in which each successive digit after the second digit indicates a finer level of detail. Industry sectors use the first two NAICS digits. For clarity of presentation, the BLS survey results are often presented in supersectors. The 11 supersectors include from one to four sectors. Because the state and local government sector-level results are concentrated in a few services and public administration, these statistics are reported as totals for state and local government, respectively.

Figure 3.1 shows Minnesota's injury and illness rates for the case types by industry sector and for all industries combined. Industries are ranked by their total case rate.

- Construction had the highest incidence rates for all cases, for DAFW cases and for other recordable cases.

- Manufacturing had the second-highest total case rate and the highest rate for cases with job transfer or restrictions. However, it had the sixth-highest rate for DAFW cases.

- Manufacturing, natural resources and mining, and leisure and hospitality were the only sectors with job transfer or restriction rates that were higher than their DAFW rates.

Figure 3.2 compares Minnesota's private-sector 2003 total case incidence rates with the U.S. rate for each supersector. With the exception of information and financial activities, the Minnesota industry rates are higher than the corresponding U.S. rates. Some of these rate differences may result from different employment distributions among the constituent industries in each sector. Only the rate differences in construction and manufacturing are statistically significant.

Figure 3.1 Incidence rates by industry supersector, Minnesota, 2003

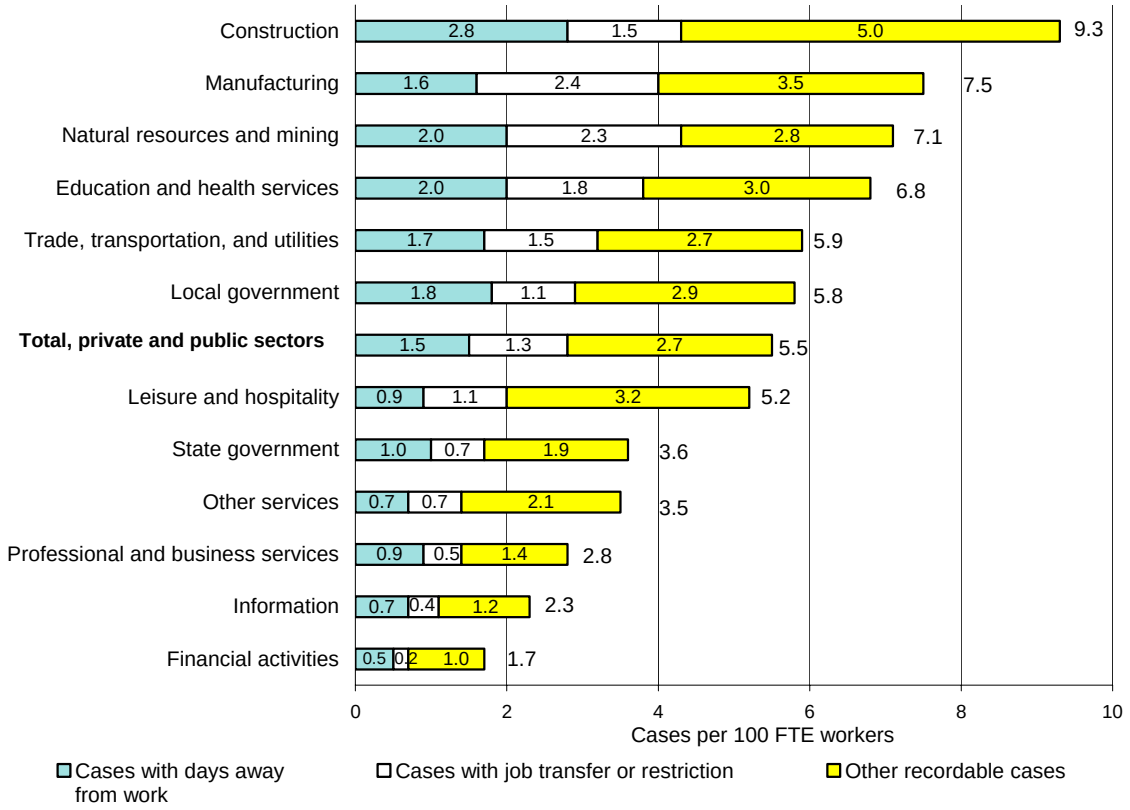


Figure 3.2 Incidence rates per 100 full-time workers for total nonfatal occupational injuries and illnesses by industry supersector, Minnesota and the United States, 2003

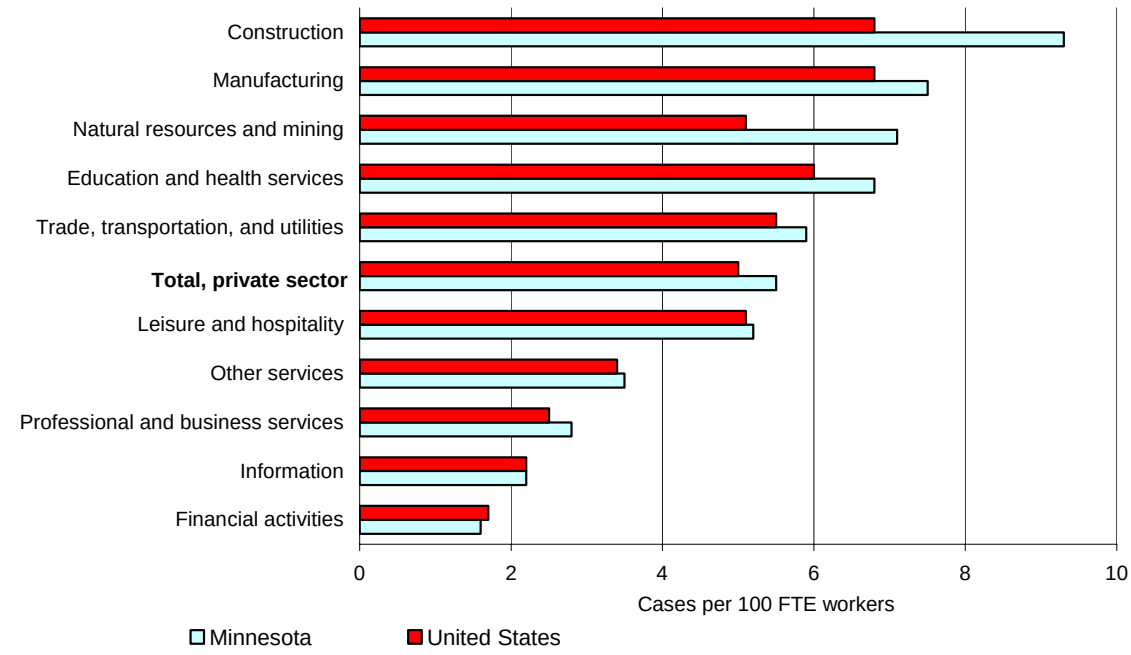


Figure 3.3 Percentage of total cases and employment by industry supersector, 2003

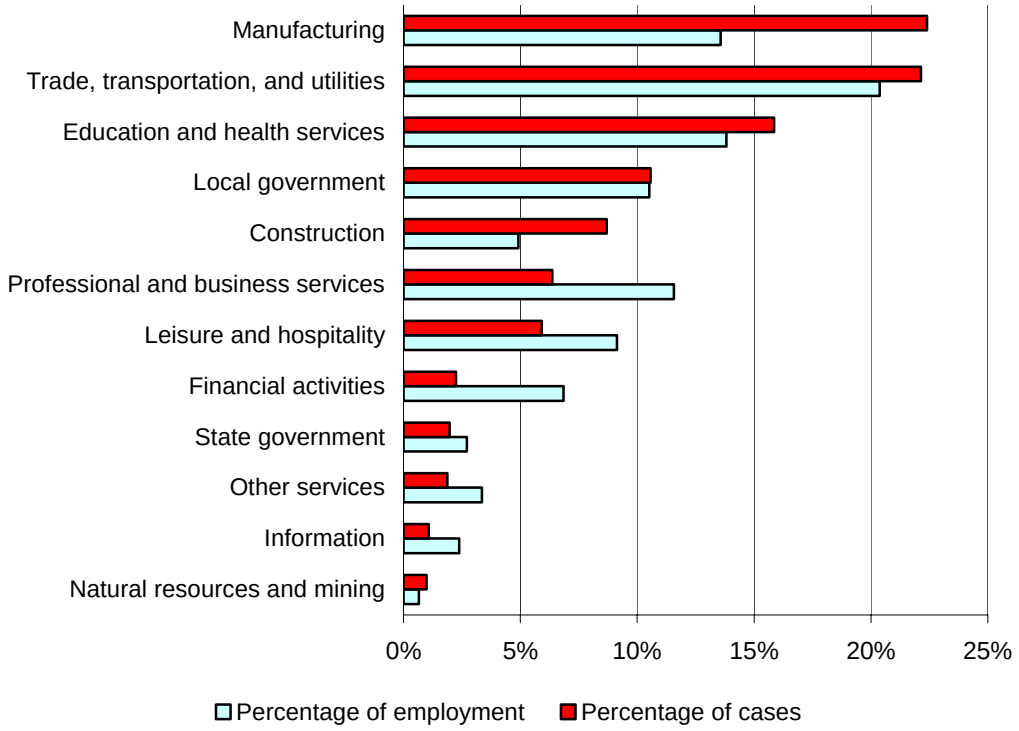


Figure 3.3 compares the percentage of employment for each of the supersectors with the percentage of total cases reported. Cases and employment are the components for calculating the case rates. Industries with higher percentages of cases compared to employment will have the highest total case rates, as shown in Figure 3.1.

- Manufacturing and trade, transportation and utilities each accounted for 22 percent of the cases. Trade, transportation and utilities was the largest supersector, with 20 percent of Minnesota's employment. Manufacturing was the third-largest employment supersector.
- Education and health services was the third-highest industry supersector for total cases, and it was Minnesota's second-largest industry supersector.
- Construction had a noticeably higher percentage of total cases compared to its percentage of total employment, accounting for 9 percent of the cases and 5 percent of employment.

Days away from work

As part of the OSHA recordkeeping changes for 2002, days away from work are counted by calendar days, not scheduled work days. This change makes the BLS count more compatible with the method used in Minnesota's workers' compensation system to measure days away from work. However, unlike workers' compensation, the BLS survey number of days does not include the day of the event causing the injury or illness.

Table 3.4 shows the median number of days away from work by industry supersector.

- The median for all private-sector industries was five days, unchanged from 2002. The median duration varied widely among the industries.
- Construction had the highest median duration. It also had the highest rate for DAFW cases.
- The median number of days away from work depends on many factors, including the most common types of injuries occurring in the industry, the average age of the injured workers and the ability of employers to provide temporary work or restricted-duty work for injured workers.

Tables showing the percentage of cases by the number of days away from work are available on the DLI Web site at www.doli.state.mn.us/blsstats.htm.

Results by industry subsector

Some limited safety and health resources need to be prioritized to those industries with the highest injury and illness rates and the highest numbers of cases. Figure 3.5 shows the industry subsectors (three-digit NAICS classes) with the highest total case incidence rates in Minnesota.

- Four of these 10 subsectors are in the manufacturing sector, and three are in the health care and social assistance sector.
- These 10 industries accounted for 16 percent of the recordable cases in 2003.

Figure 3.4 Median days away from work by industry supersector, Minnesota, 2003

Industry	Median days
Construction	12
Information	7
Other services	6
Total private industry	5
Professional and business services	5
Trade, transportation, and utilities	5
Natural resources and mining	5
Manufacturing	5
State government	5
Local government	4
Financial activities	3
Leisure and hospitality	3
Education and health services	3

Figure 3.5 Industry subsectors with the highest total case rates, Minnesota, 2003

Industry	Rate per 100 FTE workers
Nursing and residential care--local gov	17.7
Transportation equipment manufacturing	17.3
Couriers and messengers	13.6
Primary metal manufacturing	12.8
Wood product manufacturing	12.7
Animal production	12.5
Nursing and residential care--private	10.5
Warehousing and storage	9.8
Hospitals--local government	9.6
Construction of buildings	9.6

The 10 industry subsectors with the highest DAFW *case incidence rates* in Minnesota are shown in Figure 3.6. This list identifies those industries with the highest rates for the most severe types of injuries and illnesses.

- Four of these 10 subsectors are in the health care and social assistance sector.
- The DAFW rate for local government nursing and residential care facilities is one-and-one-half times the next highest rate, and is two-and-one-half times the rate of private sector nursing and residential care facilities.

Figure 3.7 shows the industry subsectors with the highest *number* of DAFW cases. Allocating safety resources to these industries would have the greatest effect on reducing the statewide DAFW rate. Only four industries are listed in both figures 3.6 and 3.7. The four industries with the highest DAFW rates are not among the top 10 industries with the highest number of cases.

- These 10 industries accounted for 11,540 DAFW cases, 39 percent of the total.
- Two construction subsectors, specialty trade contractors and building construction, accounted for more than 2,600 DAFW cases, 9 percent of the total.
- Private-sector health services, which comprised 12 percent of total employment in 2003, accounted for 16 percent of the DAFW cases. Most of the injured health care employees worked in hospitals and nursing homes. Many of the injured public-sector workers were also employed in health care.

Figure 3.6 Industry subsectors with the highest rates of days-away-from-work cases, Minnesota, 2003

Industry	DAFW rate per 100 FTE
Nursing and residential care--local gov	8.0
Couriers and messengers	5.3
Hospitals--state government	4.0
Air transportation	3.3
Hospitals--private	3.1
Nursing and residential care--private	3.1
Construction of buildings	3.0
Specialty trade contractors	2.8
Transportation equipment manufacturing	2.8
Performing arts, spectator sports, and related industries	2.8

Figure 3.7 Industry subsectors with the highest number of days-away-from-work cases, Minnesota, 2003

Industry	DAFW cases[1]
Specialty trade contractors	1,830
Hospitals--private	1,790
Nursing and residential care--private	1,770
Educational services--local government	1,140
General merchandise stores	1,020
Merchant wholesalers, nondurable goods	940
Construction of buildings	760
Merchant wholesalers, durable goods	810
Ambulatory health care services	790
Fabricated metal product manufacturing	690

[1] Number of cases is rounded to nearest ten.

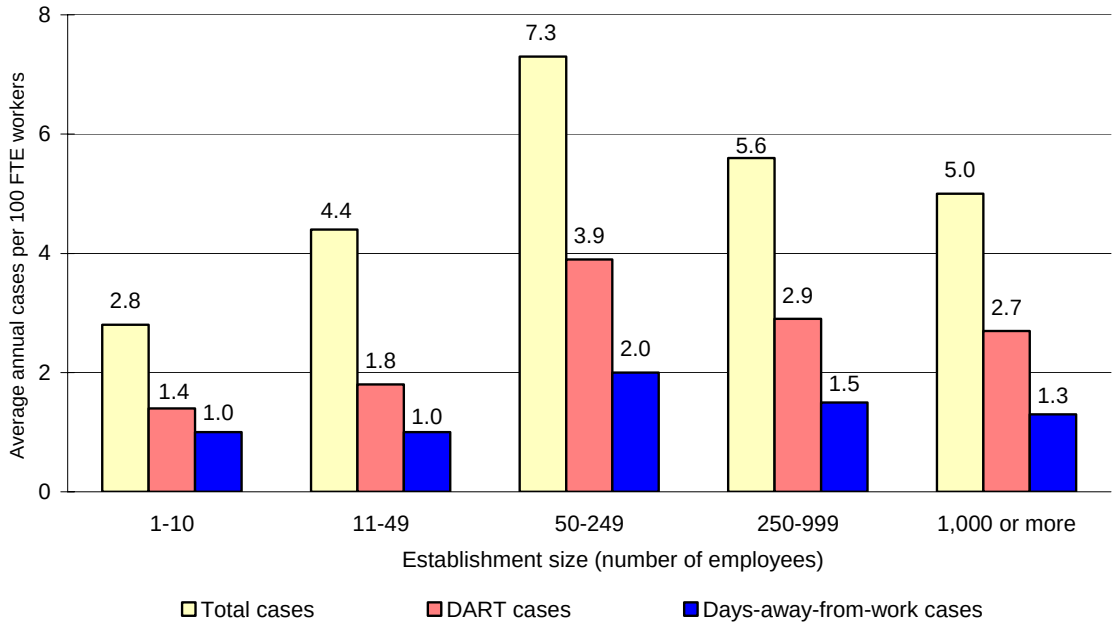
Incidence by establishment size

The incidence of reported workplace injuries and illnesses varies by establishment size. Figure 3.8 shows the case incidence by case type and establishment size, and presents the total case rates by establishment size and industry supersector.

- The rates of all three case types are lowest for the smallest establishments (one to 10 employees), highest for midsize establishments (50 to 249 employees) and intermediate for the largest establishments (1,000 or more employees).
- For nearly all industries, the smallest establishments have lower total case rates than do the midsize establishments.
- Differences due to employer size may be attributed to the amount of safety resources available and to recordkeeping. Large companies generally have more resources available, such as full-time, on-site safety directors. These safety professionals may also improve the communication and recording of worker injuries and illnesses. Worker surveys have found that a large proportion of workplace injuries and illnesses are not reported, and that worker exposure to hazards at small establishments is at least as great as at larger ones.[7]

[7] Biddle and Roberts, "More evidence of the need for an ergonomic standard," *American Journal of Industrial Medicine*, 2004, vol. 45, pp. 361-370; Morse, Dillon, Weber, et al., "Prevalence and reporting of occupational illness by company size: population trends and regulatory implications," *American Journal of Industrial Medicine*, 2004, vol. 45, pp. 329-337.

Figure 3.8 Injury and illness case incidence rates by establishment size for private industry, Minnesota, 2003



Industry supersector	Total recordable cases per 100 full-time-equivalent workers by establishment size (number of employees)[1]					
	All Sizes	1-10	11-49	50-249	250-999	1,000+
Natural resources and mining	7.1	6.3	4.4	--	6.5	--
Construction	9.3	5.5	10.2	11.8	--	--
Manufacturing	7.5	--	6.3	9.1	7.1	6.7
Trade, transportation, and utilities	5.9	2.4	4.9	7.9	6.5	8.6
Information	2.2	--	0.9	2.8	2.5	2.7
Financial activities	1.6	--	1.5	2.0	2.0	1.0
Professional and business services	2.8	--	3.1	3.5	1.9	2.2
Education and health services	6.8	1.1	1.5	10.0	7.3	8.0
Leisure and hospitality	5.2	--	3.1	7.1	7.9	--
Other services	3.5	3.5	3.4	4.3	2.4	--
State government	3.5	3.1	4.1	3.9	4.9	2.9
Local government	5.8	--	--	6.0	6.4	4.6

1. Only cells with data meeting BLS publication standards are shown.

4

Characteristics of cases with days away from work

This chapter presents, for cases resulting in one or more days away from work, the statewide distributions of the demographic characteristics of the workers, their job characteristics, and the characteristics and causes of their injuries and illnesses. New to the survey for 2003 are statistics about the time of day, hours on the job before the event occurred, and the day of the week the injury occurred or illness began.

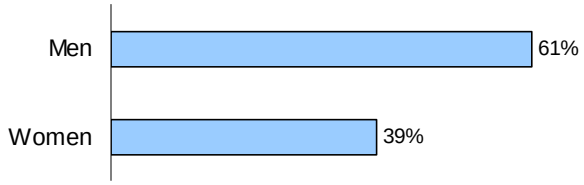
The information used to create these distributions is collected as part of the BLS survey. Employers participating in the survey provide the information for each DAFW case.[8] DLI Research and Statistics survey staff members code the descriptions of the injury or illness and the incident into the appropriate nature, part of body, event and source codes.

Worker demographic characteristics

Gender

- The percentage of women among DAFW cases increased from 36 percent in 2002, to 39 percent in 2003. This percentage was reached only once before, in 1998. Women comprised 48 percent of Minnesota's 2003 employment.
- The number of women with DAFW cases has been decreasing along with the total number of DAFW cases. In 1992, there were 14,980 women with DAFW cases, 12,120 cases in 2002, and 11,540 cases in 2003.
- The percentage of women among DAFW cases varies by industry. Women accounted for 79 percent of private education and health services cases, 57 percent of leisure and hospitality cases and 52 percent of local government cases. In construction, women comprised 2 percent of the cases.

Figure 4.1 Gender of workers with days-away-from-work cases, Minnesota, 2003



[8] For employers with a significant number of DAFW cases (more than 30), a sampling scheme is used to select a reduced number of cases.

Age

- The age distribution of injured workers has changed significantly during the past decade, reflecting the increasing average age of the workforce. The U.S. Census showed that the median age of Minnesotans increased from 32.4 years in 1990, to 35.4 years in 2000.[9]
- With the declining DAFW case rate, this means there are fewer seriously injured workers, but they tend to be older than a decade ago.[10]
- The age distribution of injured workers generally matches the age distribution of employed workers.[11] However, younger workers tend to account for a slightly higher proportion of injured workers than their proportion for all workers. Workers from 35 to 44 years of age accounted for 24 percent of workers and for 29 percent of injured workers. In contrast, workers from 45 to 54 years of age accounted for 25 percent of all workers and for only 22 percent of injured workers.
- The percentage of injured workers who were younger than age 35 decreased from 51 percent in 1992 to 37 percent in 2003, while the percentage of injured workers who were age 45 and older increased from 23 percent to 34 percent.
- Even though the total number of DAFW cases decreased by 13,200 from 1992 to 2003, the number of cases among workers age 65 and older increased from 360 cases to 540 cases.
- Except for the oldest age group, the median days away from work increases with age. Workers 65 years and older had the highest percentage of cases with only one day away from work. This may be the result of the older workers using a day away from work for injuries that would not require lost work time for younger workers.

Figure 4.2 **Age of workers with days-away-from-work cases, Minnesota, 2003**

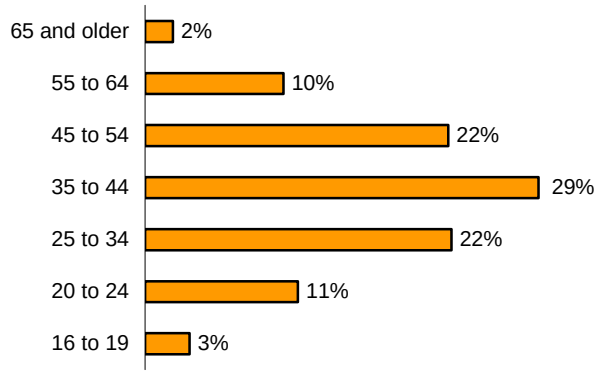


Figure 4.3 **Distribution of age of workers with days-away-from-work cases, Minnesota, 1992-2003**

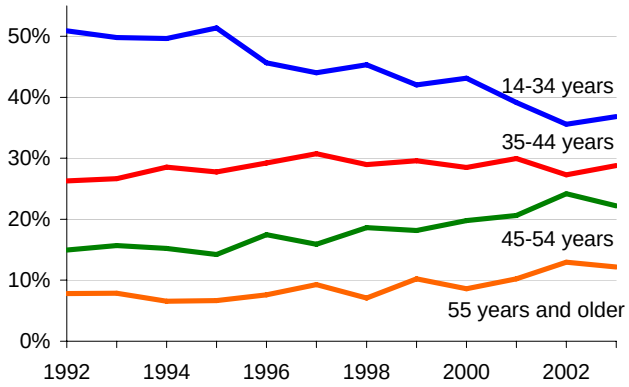
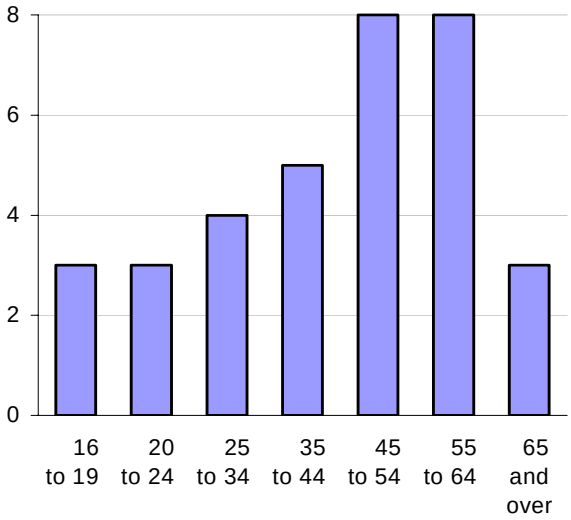


Figure 4.4 **Median days-away-from-work by age group, Minnesota, 2003**



[9] Census 2000: Minnesota age profile. Minnesota Planning State Demographic Center, June 2003. www.demography.state.mn.us/Cen2000profiles/cen00profage.html.

[10] This trend has been analyzed using Minnesota workers' compensation data in "Changing worker demographics lead to changing injury characteristics," COMPACT, Feb. 2005. www.doli.state.mn.us/pdf/feb05-2.pdf

[11] Current Population Statistics, Geographic Profile of Employment and Unemployment, 2003. Bureau of Labor Statistics. www.bls.gov/lau/table14full03.pdf

Race or ethnic origin

Some caution is needed in the analysis of race or ethnic origin, because 26 percent of the survey responses did not include the injured worker's race or ethnic origin. The survey results reflect the increasing diversity of Minnesota's workforce.

- There were 13,200 fewer DAFW cases in 2003 compared to 1992, but the number of DAFW cases identifying nonwhite injured workers increased from 2,110 cases to 3,250 cases, a 50 percent increase.
- From 2002 to 2003, there were 3,000 fewer white-only workers with DAFW cases, a 14 percent decrease, while the number of nonwhite workers with DAFW cases remained unchanged. The percentage of cases not reporting race or ethnic origin remained essentially unchanged.
- Nonwhite workers accounted for 15 percent of the cases with a reported race or ethnicity in 2003, compared to 13 percent in 2002, and only 7 percent in 1992.
- The reported number of Hispanic workers with DAFW cases in 2003 was 96 percent higher than the number in 1992.
- Employment estimates from the Current Population Survey for 2003 show that white workers accounted for 93 percent of Minnesota's employment. If the race and ethnic origin distribution of the nonreporting cases is similar to the distribution for the cases with race and ethnic origin reported, then the DAFW case incidence rate is higher for nonwhite workers than for white-only workers.

Figure 4.5 Race or ethnic origin of workers with days-away-from-work cases, Minnesota, 2003

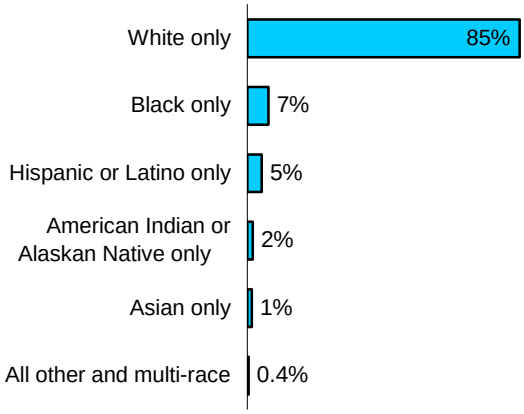
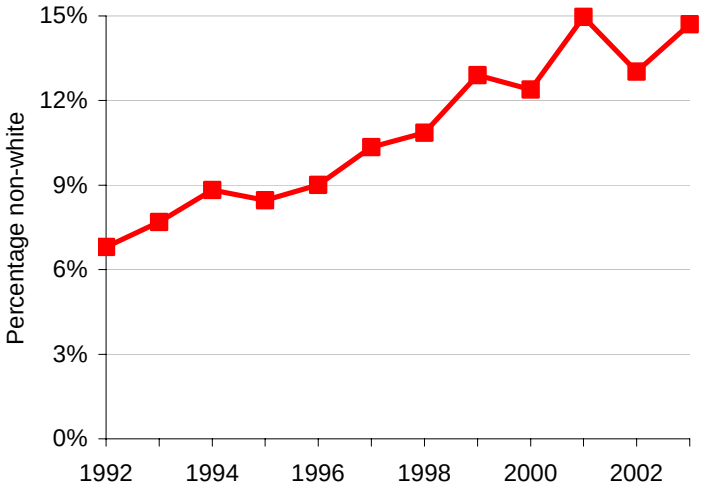


Figure 4.6 Percentage of nonwhite workers among days-away-from-work cases, Minnesota, 1992-2003



Job characteristics

Job tenure

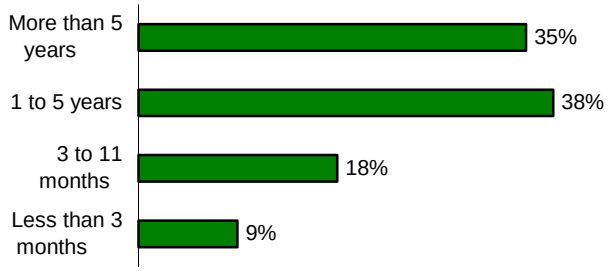
A worker's length of service with an employer is a general measure of the worker's attainment of job skills. Workers with short job tenures include new entrants and reentrants to the workforce, those who lost jobs but found new jobs during the previous year, and workers who had voluntarily changed employers during the previous year. Also, young workers usually have shorter job tenure than older workers. Injuries to workers with short job tenures may be indicative of workers who were not adequately trained or who did not meet all the physical requirements the new jobs demanded.

- Employees with less than one year of service with their employer accounted for 27 percent of the DAFW cases. This was down from 30 percent in 2002, and is the lowest percentage since 1993.

- According to the Current Population Survey statistics for January 2004,[12] the national proportion of wage and salary workers with a year or less of tenure with their current employer was 23 percent, while 31 percent had from one to five years of job tenure, and 46 percent had more than five years. Thus, workers with short job tenures accounted for a disproportionately high percentage of the DAFW cases.

- The distribution of job tenure among workers with DAFW cases varied greatly by industry, reflecting the amount of labor turnover. Workers with less than one year tenure accounted for 47 percent of the cases in leisure and hospitality and in natural resources and mining, but they accounted for less than 1 percent of the cases in professional and business services.

Figure 4.7 Length of service of workers with days-away-from-work cases, Minnesota, 2003



[12] News release, Bureau of Labor Statistics, *Employee tenure in 2004*, Sept. 21, 2004. State-level job tenure statistics are not published.

Occupation

Occupations describe a set of characteristics based on the job duties, skills, education or experience needed to accomplish work tasks. Some occupations are concentrated in certain industries, such as nursing aides working in the hospital and nursing home industries. However, many other occupations, such as management, sales and office support, are found in a wide range of industries.[13] Workers in the same or similar occupations often encounter similar work conditions, which affect their safety and health.

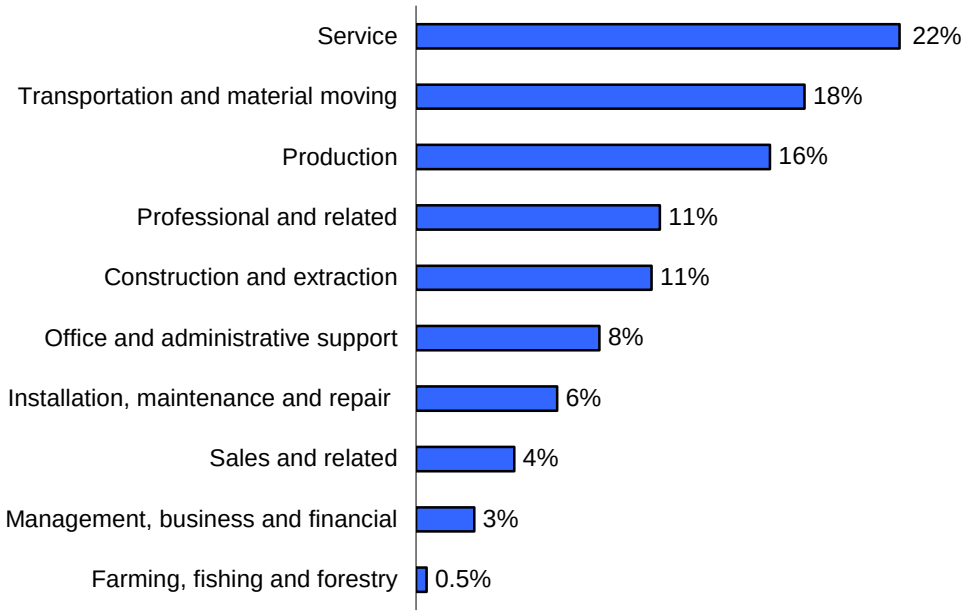
Beginning with the 2003 BLS survey, occupations are named and categorized according to the 2000 Standard Occupational Classification (SOC) system. Because of this change, occupation results are not comparable with results from earlier years.

Occupation is presented by broad category in Figure 4.8, by major group in Figures 4.9 and 4.10, and by detailed occupation in Figure 4.11. A few broad categories are the same as major groups (e.g., production and sales).

Figure 4.8 shows the percent distribution of DAFW cases by broad occupation category. These results generally reinforce the broad industry category results, shown in Figure 3.1. The three highest-percentage occupation groups accounted for 56 percent of the DAFW cases and for 31 percent of workers.

- Service occupations, such as nursing aides, law enforcement workers, cooks and building maintenance workers, composed the largest occupation category for 2003 DAFW cases.
- Transportation and material moving occupations, the second-largest occupation group among DAFW cases, includes truck drivers, airline workers and unskilled manual laborers (nonconstruction).
- Production occupations, the third-largest occupation group among DAFW cases, includes assemblers, food processing workers and woodworkers.

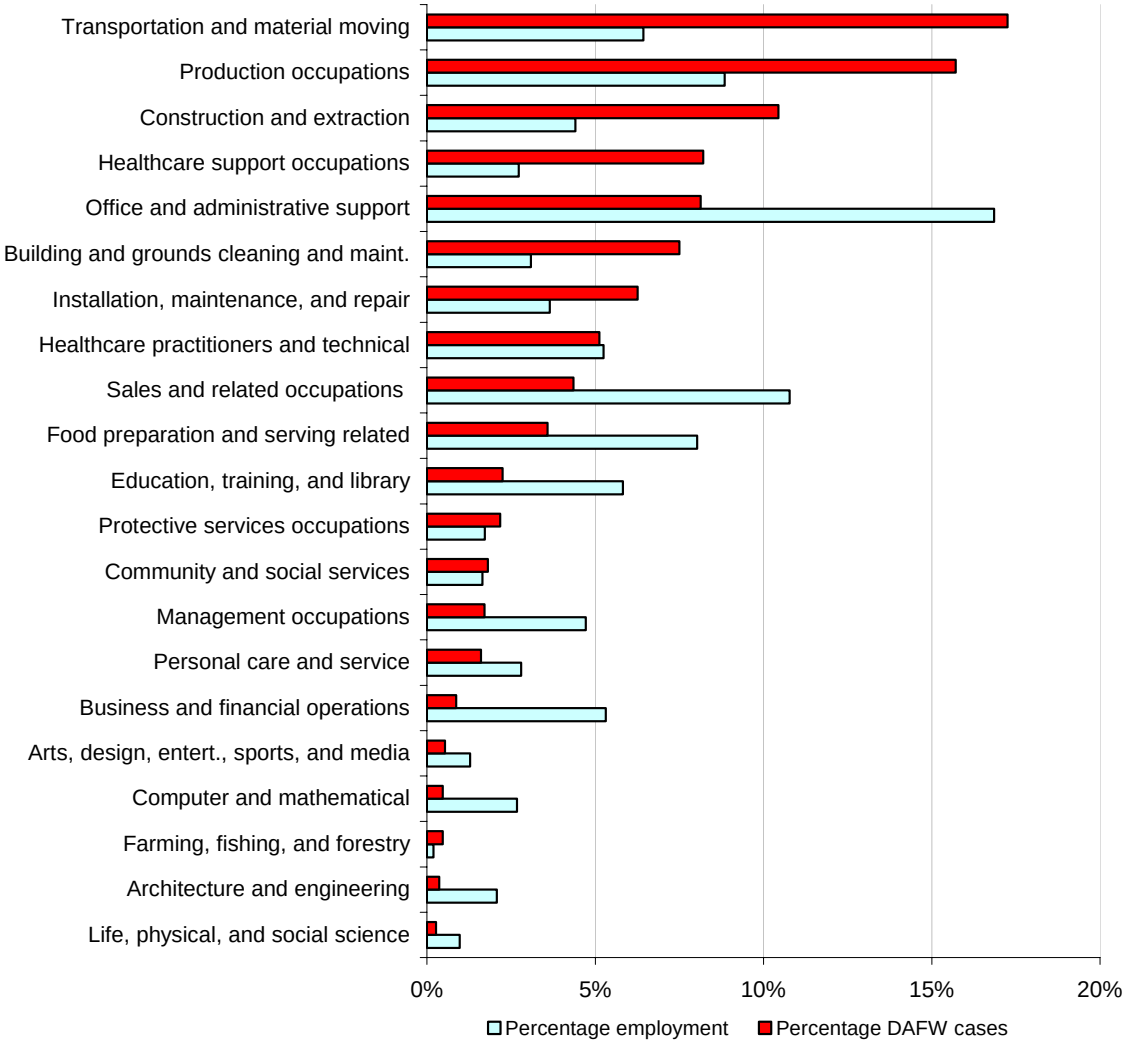
Figure 4.8 Occupation of workers with days-away-from-work cases, Minnesota, 2003



[13] The 2003 Minnesota occupational staffing matrix, showing the distribution of occupations by industry, is available at www.deed.state.mn.us/lmi/tools/oes/staffing_patterns.htm.

- Figure 4.9 shows the percentages of employment and DAFW cases by occupation group.[14] The figure highlights the differences between the occupation distributions of all workers and among workers with DAFW cases. This dramatically shows that certain occupations are responsible for a large percentage of the DAFW cases.
- Three of the four largest occupation groups, office and administrative support occupations, sales and related occupations, and food preparation and serving related occupations, accounted for much smaller percentages of the DAFW cases.

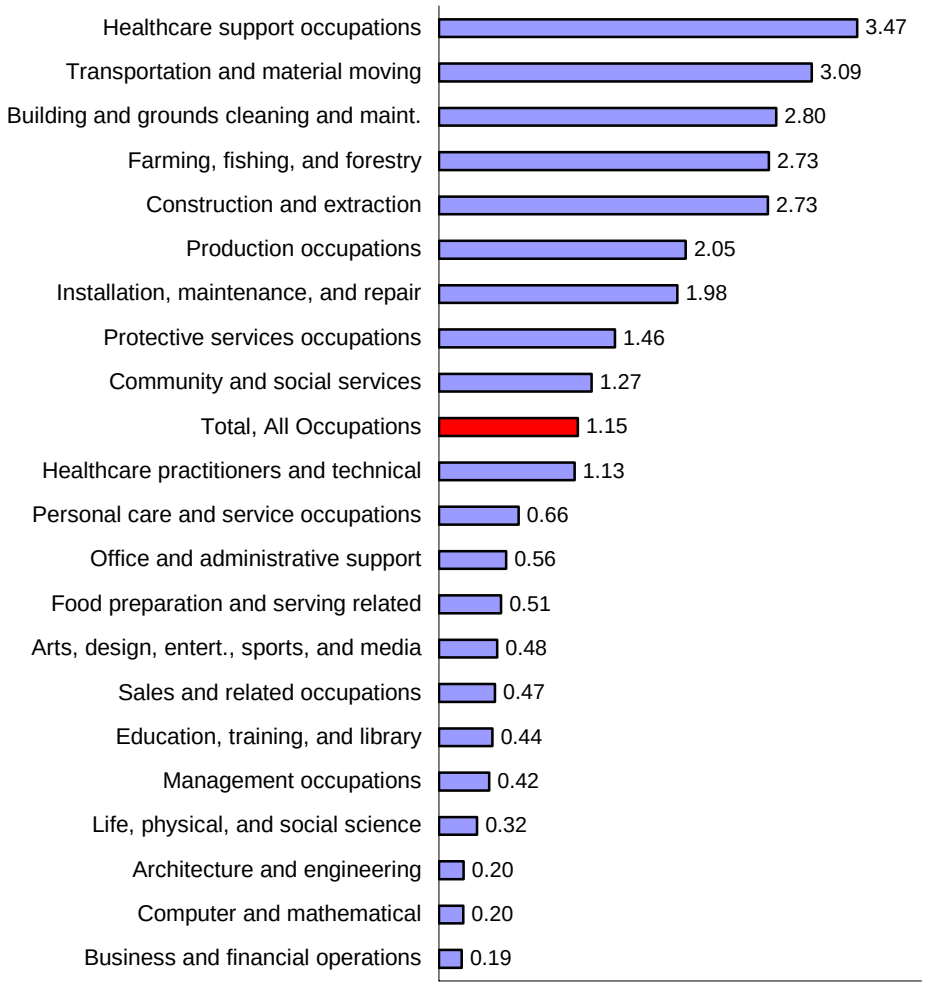
Figure 4.9 Employment and days-away-from-work cases by occupational group, Minnesota, 2003



[14] Statistics about Minnesota employment by occupation are available from the Occupational Employment Statistics program at the Department of Employment and Economic Development. www.deed.state.mn.us/lmi/tools/oes/about.htm

- Two occupation groups each accounted for more than 15 percent of the DAFW cases, transportation and material moving and production. Both of these groups contain the same occupations as the broad categories of the same name in Figure 4.8.
- The median number of days away from work also varied widely among occupation groups, from one day for computer and mathematical occupations to 13 days for farming, fishing and forestry occupations and 10 days for construction and extraction occupations.
- The differences in occupations are further revealed by the rate of DAFW cases per 100 workers, shown in Figure 4.10.[15] This shows that the rate for healthcare support occupations is three times the statewide average.
- Many occupations, especially those where most of the work takes place in an office environment, have very low DAFW rates.
- By using this occupation rate chart and the industry rate charts presented in the previous chapter, safety professionals can identify where safety resources can be most effective.

Figure 4.10 Rate of days-away-from-work cases per 100 employees by occupational group, Minnesota, 2003



[15] These rates are based on the number of workers, not on full-time equivalent workers, and are not comparable to the incidence rates reported in previous chapters.

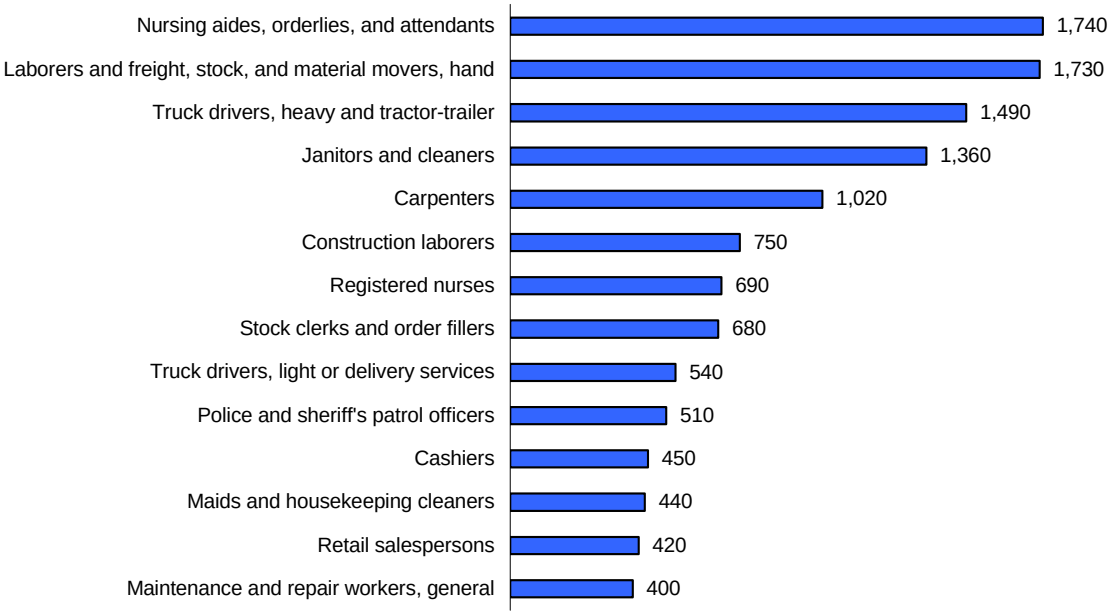
- The detailed occupations with 400 or more DAFW cases are shown in Figure 4.11. The five specific occupations with at least 1,000 DAFW cases accounted for 25 percent of all DAFW cases.

The two occupation groups with the highest numbers of DAFW cases were nursing aides, orderlies and attendants and manual laborers and freight, stock and material movers. The latter group includes workers who manually move freight, stock, or other materials or perform other unskilled general labor. These two occupations accounted for 12 percent of all DAFW cases. However, these two occupations have very different worker and injury profiles.

- Among nursing aides, orderlies and attendants:
  - 92 percent of the injured workers were women;
  - 31 percent were from 25 to 34 years old, 32 percent were from 35 to 44 years old and only 3 percent were 55 years or older;
  - 47 percent had been with their employer for less than one year;
  - 76 percent were white with 19 percent Black or African American;
  - the median days away from work was three days, with 42 percent of the cases involving only one or two days away from work;
  - 86 percent of the injuries involved sprains and strains or soreness and pain;
  - 48 percent of the injuries were to the back;
  - 62 percent of the injuries were caused by overexertion and 7 percent were due to assaults;
  - health care patients were the source of 63 percent of the injuries;
  - Friday was the most common weekday for injuries, with 22 percent of the cases, and 27 percent occurred during the weekend;
  - 48 percent of the injuries occurred between 4 a.m. and noon; and
  - 26 percent of the injuries occurred when the worker was on the job for less than an hour.

- Among freight, stock and material movers:
  - 86 percent of the injured workers were men;
  - 26 percent were from 25 to 34 years old, the largest age group, and 9 percent were at least 55 years old;
  - 35 percent had been with their employer for less than one year;
  - 85 percent were white and the remainder was divided nearly equally between Blacks, Hispanics and Asians;
  - 24 percent were employed in manufacturing, 24 percent were in wholesale trade and 23 percent were in retail trade;
  - the median days away from work was four days and 38 percent of the cases had only one or two days away from work;
  - 57 percent of the injuries involved sprains and strains or soreness and pain;
  - 28 percent of the injuries were to the back;
  - the primary events causing injuries were overexertion (39 percent) and being struck by an object (15 percent);
  - containers were involved in 32 percent of the injuries and another 17 percent involved the worker's motion or position;
  - Monday was the most common day of the week for injuries (21 percent), and 15 percent of the injuries occurred during weekends;
  - 55 percent of the injuries occurred during the 8 a.m. to 4 p.m. workday; and
  - workers on the job from two to four hours accounted for 26 percent of the cases, the most common time group, while only 8 percent occurred to workers on the job less than one hour.

Figure 4.11 Specific occupations with the highest number of cases, Minnesota, 2003



Characteristics of injuries and illnesses

Each DAFW case can be characterized by the nature of the injury or illness, the part of the body affected, the event or exposure leading to the injury or illness and the source of the injury or illness. Additional characteristics of injuries and illnesses are the time of day, time on the job and day of week the injury occurred or illness began.

As an example of how the first four characteristics combine to describe injuries and illnesses, consider an injury to a health care worker who sprains his back while helping a patient get out of bed. The nature, or physical effect, is a sprain or strain; the part of body affected is his back; the event is overexertion while lifting; and the source is the health care patient.

Nature of injury or illness

The nature of injury or illness identifies the principal physical characteristic(s) of the injury or illness.

- Sprains, strains and tears of muscles, tendons and joints accounted for 45 percent of the DAFW cases, a slight increase from the 42 percent reported for 2002. However, because of the overall decrease in the number of cases, the 13,400 sprain and strain cases reported in 2003 was 850 fewer than in 2002.

- Cases of soreness and pain have ranged from 8 percent in 2001 and 2003, to 12 percent in 2002.

- The most common specific nature of injury—sprains, strains and tears—occurred primarily to the back, knee and shoulder. These injuries were often caused by worker motion and while lifting containers.

Figure 4.12 Nature of injury, Minnesota, 2003

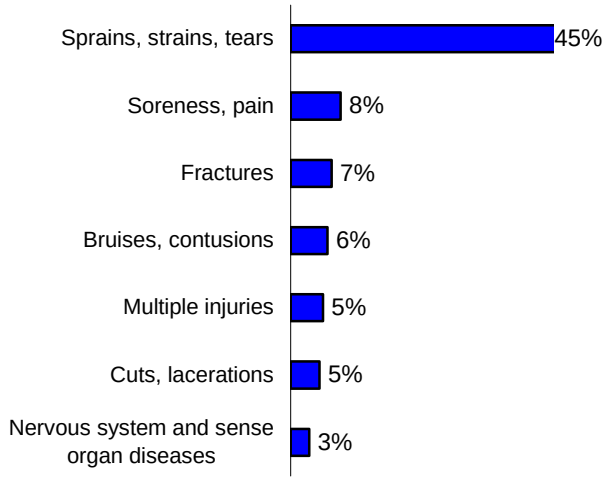


Figure 4.13 Most common detailed nature of injury classifications, Minnesota, 2003

Nature of injury	Number of cases
Total cases	29,860
Sprains, strains, tears	13,370
Fractures	1,960
Bruises, contusions	1,760
Cuts, lacerations	1,380
Soreness, pain, hurt, non-back	1,140
Back pain, hurt back	1,130
Carpal tunnel syndrome	700
Hernia	460
Sprains and bruises (multiple injury)	410
Punctures, except bites	330

Part of body

The part of body affected identifies the part of the body directly affected by the previously identified nature of injury or illness.

- This is the first year that back injuries accounted for fewer cases than injuries to the shoulders and upper extremities. Back injuries have accounted for about 30 percent of the cases since injury characteristics were first collected in 1992.
- The number of back cases (7,800) was less than 9,000 for the first time ever.
- Among the detailed body part categories, the lumbar back was the most frequently injured part of the body. Lumbar back injuries are mostly sprains or strains, or have a more general description of back pain. Overexertion in lifting and the worker's own bodily motion were the primary causes of lumbar back injuries.
- The most common injury to multiple body parts was sprains and strains. Multiple body part injuries occurred most often as a result of falls and overexertion. Women accounted for about half the multiple part injury cases.
- Many of the knee injuries were sprains and strains resulting from the worker's own bodily motion or from falls.

Figure 4.14 Part of body injured, Minnesota, 2003

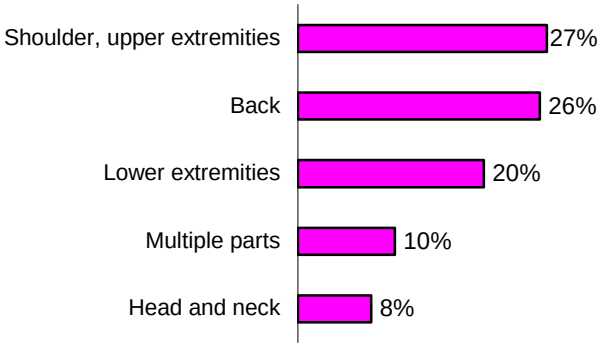


Figure 4.15 Most common detailed part of body classifications, Minnesota, 2003

Part of body injured	Number of cases
Total cases	29,860
Back, lumbar region	4,330
Multiple body parts	3,110
Back, unspecified	2,550
Knee(s)	2,490
Finger(s), fingernail(s)	2,230
Shoulder, including clavicle, scapula	1,920
Wrist(s)	1,640
Ankle(s)	1,590
Arm(s)	1,010
Hand(s), except finger(s)	770

Event or exposure

The event or exposure describes the manner in which the injury or illness was produced or inflicted by the source of injury or illness.

- Overexertion continued to account for the largest proportion of cases.
- The most common specific event, overexertion in lifting, was most often cited for lifting containers, health care patients, and parts and materials. These events caused sprains and strains and soreness, most commonly to the back. One-third of all back injuries were the result of overexertion in lifting.
- Falls to the floor, walkway or other surfaces commonly resulted in sprains and strains, fractures, and bruises and contusions. The industries with the highest numbers of these falls were health care and retail trade. The majority of these injuries occurred to women.
- While workers younger than age 35 accounted for 36 percent of the injured workers, they accounted for the majority of workers with injuries caused by being struck by an object.
- Workers injured by being struck by an object were concentrated in the construction, manufacturing, and retail trade industries. These events most commonly resulted in cuts and bruises to the hands, fingers, and feet. The objects striking the workers were most often parts and materials, containers and handtools.

Figure 4.16 Event or exposure, Minnesota, 2003

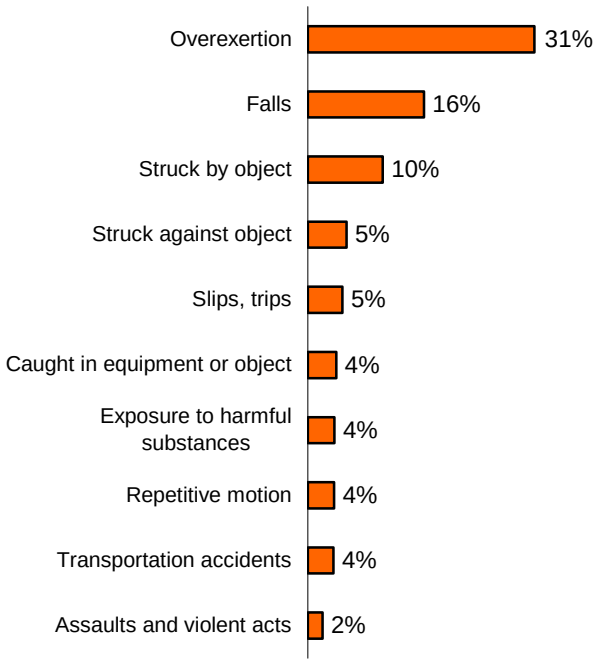


Figure 4.17 Most common detailed event or exposure classifications, Minnesota, 2003

Event or exposure	Number of cases
Total cases	29,860
Overexertion in lifting	4,030
Fall to floor, walkway, or other surface	2,610
Slip, trip, loss of balance--without fall	1,430
Bending, climbing, crawling, reaching, twisting	1,240
Overexertion in pulling or pushing objects	1,240
Struck by falling object	1,180
Struck against stationary object	1,060
Assaults and violent acts by person(s)	610
Overexertion in holding, carrying, turning, or wielding objects	600
Collision between vehicles, mobile equipment	540

Source of injury or illness

The source of injury or illness identifies the object, substance, bodily motion or exposure that directly produced or inflicted the previously identified injury or illness.

- Worker bodily motion or position continued to be the most common injury source, accounting for 17 percent of the DAFW cases. Bodily motion or position refers to injuries caused by the free motion of the worker's body, which most often results in stress or strain to particular body parts.
- Floors and ground surfaces are often the source of injuries caused by falls.
- Workers with more than five years of job tenure accounted for 41 percent of the cases with the detailed source category, bodily motion or position. Worker motion or position is commonly associated with sprains and strains and repetitive motion injuries, including carpal tunnel syndrome. Injuries due to slips and trips are coded with the worker's bodily motion as the source.
- Women accounted for 88 percent of the injuries caused by health care patients. Injuries due to contact with health care patients was often in the process of lifting or helping move the patient and sometimes the result of an assault by the patient.
- Women accounted for 48 percent of the injuries caused by falls to floors of buildings. The resulting injuries often involved multiple body parts.

Figure 4.18 Source of injury or illness, Minnesota, 2003

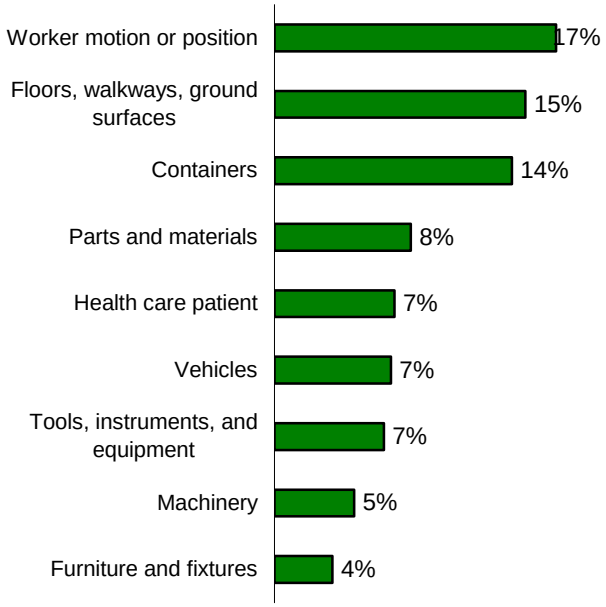


Figure 4.19 Most common detailed source of injury or illness classifications, Minnesota, 2003

Source of injury or illness	Number of cases
Total cases	29,860
Bodily motion or position of injured, ill worker	5,100
Health care patient or resident of health care facility	2,170
Floor of building	1,850
Boxes, crates, cartons	1,590
Ground	830
Tanks, bins, vats	680
Person--other than injured or ill worker or patient	550
Parking lots	480
Truck	480
Bags, sacks, totes	450

Work-related musculoskeletal disorders

The BLS uses the survey results to produce an estimate of the number of cases with work-related musculoskeletal disorders (WMSDs) among the DAFW cases. Although employers do not directly identify WMSDs on the OSHA log, information about the injured body part and the event or exposure is combined to produce this estimate. The BLS defines WMSDs as disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs that **are not caused** by slips, trips, falls, motor-vehicle accidents or other similar accidents. Because of the recordkeeping changes in 2002 that directly addressed WMSD issues (see below), comparisons with 2001 and earlier years may be the result of actual changes in job safety or the effects of the recordkeeping itself.

- There were approximately 11,260 DAFW cases with WMSDs in Minnesota in 2003, accounting for 38 percent of all DAFW cases (Figure 4.20).
- The number of WMSD cases decreased by 15 percent from 2002, while the number of non-WMSD cases decreased by 11 percent.
- The incidence rates for WMSD cases decreased, especially in private industry (Figure 4.21).
- WMSD cases have also dropped as a percentage of all DAFW cases, decreasing from a high of 42 percent in 1999, to 38 percent in 2003.
- Among the private sector industries, health care had the highest proportion of WMSD cases among its DAFW cases, with 56 percent. WMSD cases accounted for 38 percent of the cases in manufacturing and for 26 percent of the cases in construction.

WMSD recordkeeping changes

The OSHA recordkeeping changes in 2002 make direct comparisons between the 2003 and 2002 results and those for earlier years unreliable. Data from earlier years are provided to show readers the longer-term trend.

Some of the recordkeeping changes that affected the number of reported WMSD cases are:

- An aggravation of a case where signs or symptoms have not been resolved is not a new case, even if the aggravation was caused by a new event or exposure. Previously, each new event or exposure was treated as a new case.
- Under the previous requirements, a cumulative trauma disorder was considered a new case if no care was received for the previous 30 days. The new requirements have no such criteria. In the absence of a new work-related event or exposure, the reappearance of signs or symptoms may be treated as part of the previous case.
- WMSDs are recordable when general OSHA log recording criteria are met.[16] Previously, WMSDs were recordable under the general criteria *or* when identified through a clinical diagnosis or diagnostic test.

[16] OSHA log recording criteria are explained in "Recordkeeping 101: Tracking injuries, illnesses puts you in control," *Safety Lines*, Minnesota Department of Labor and Industry, Winter 2005. www.doli.state.mn.us/safeline.html

Figure 4.20 **Number of WMSD and non-WMSD DAFW cases, Minnesota, 1998-2003**

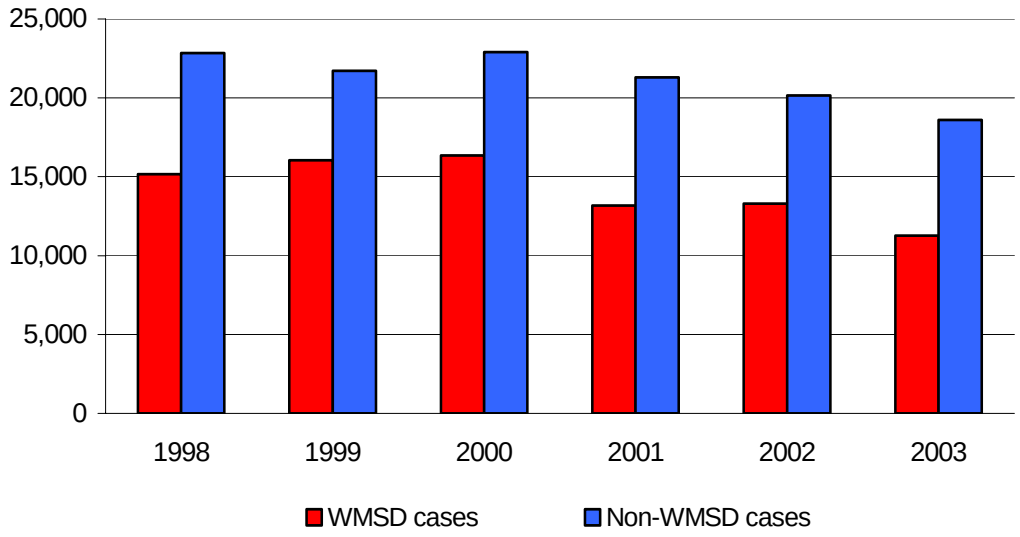


Figure 4.21 **Number and incidence rate of WMSD cases involving days away from work, Minnesota, 1998-2003**

Year	Private industry		State government		Local government	
	Number	Incidence rate[1]	Number	Incidence rate[1]	Number	Incidence rate[1]
1998	13,550	76.4	360	46.0	1,240	71.0
1999	14,520	80.5	230	33.3	1,290	68.7
2000	14,870	80.5	230	37.9	1,240	68.7
2001	11,830	66.7	200	31.5	1,130	55.1
2002	12,030	68.7	210	35.5	1,070	53.5
2003	9,940	55.8	230	37.2	1,090	54.0

1. Incidence rates represent the number of cases per 10,000 full-time workers.

Time of injury or illness

The time of injury or illness has three dimensions: the time of day of the event, the worker's hours on the job before the event occurred and the day of the week of the event. The percentages reported below are based on cases with reported data; 19 percent of the cases did not include a time of event, and 20 percent did not include the hours on the job before the event.

- The four hours from 8:00 a.m. to noon accounted for 31 percent of all injuries and illnesses with days away from work. The four hours from noon to 4:00 p.m. accounted for an additional 26 percent of the cases.
- The four-hour morning period had the highest percentage of DAFW cases for all industry supersectors except for information, financial activities, and leisure and hospitality.
- Employees on the job from two to four hours incurred 24 percent of all DAFW cases. This is consistent with the high percentage of morning cases. Workers on the job for fewer than two hours accounted for 27 percent of the cases.
- In construction, the highest percentage of DAFW cases, 29 percent, occurred for workers on the job for six to eight hours.
- Monday was the day of the week with the highest percentage of cases. Friday had the lowest percentage of cases among the weekdays.
- This weekly pattern was consistent in all the industry supersectors except leisure and hospitality, where injuries and illnesses were distributed more evenly throughout the week, peaking on Wednesday and reaching a low on Thursday.

Figure 4.22 Time of event, Minnesota, 2003

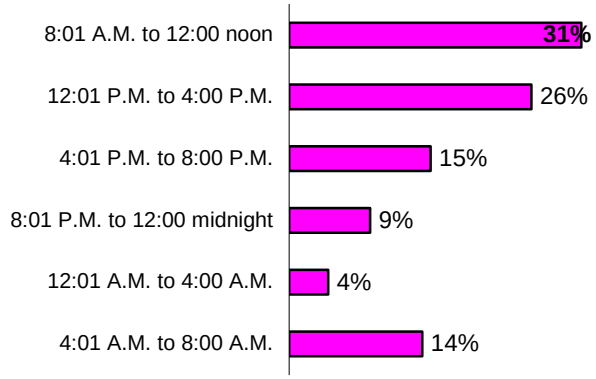


Figure 4.23 Hours on the job before event occurred, Minnesota, 2003

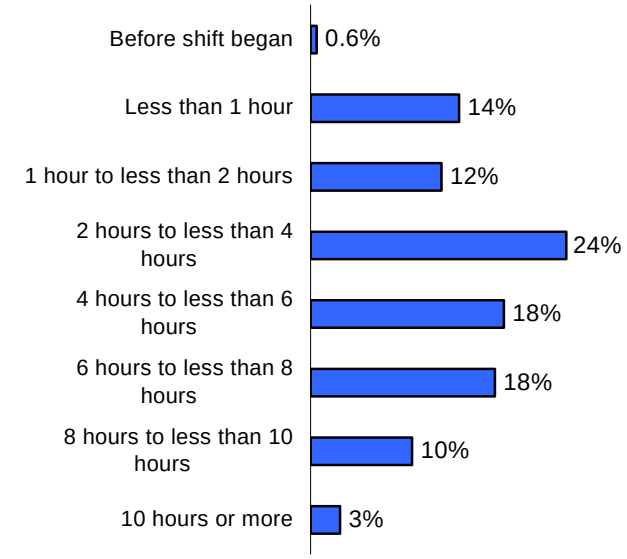
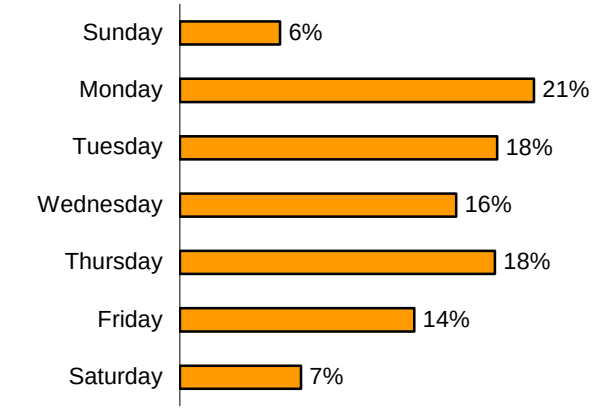


Figure 4.24 Day of week, Minnesota, 2003



5
Fatal occupational injuries

In 2003, 72 Minnesota workers were fatally injured on the job. This is a decrease from the 81 fatalities in 2002, and less than the 1998 through 2002 annual average of 75 fatalities. Nationwide, 5,575 workers were fatally injured during 2003.

These and other findings are from the nationwide *Census of Fatal Occupational Injuries* (CFOI), conducted by the BLS with state and other federal agencies. The Department of Labor and Industry collects CFOI data for the state of Minnesota.

The CFOI covers all fatal work injuries in the private and public sectors, whether the workplaces concerned are covered by the Occupational Safety and Health Act or other federal or state laws, or are outside the scope of regulatory coverage. For example, the CFOI includes federal employees and resident armed forces, even though they have different legal and regulatory coverage than other workers. It also includes self-employed and unpaid family workers, including family farm workers. Work-related fatal illnesses (e.g., asbestosis, silicosis and lead poisoning) are excluded from the CFOI because many occupational illnesses have long latency periods and are difficult to link to work.

The CFOI provides a complete count of fatal work injuries by using multiple sources to identify, verify and profile these incidents. The sources include death certificates, coroners' reports, workers' compensation reports and news media reports.

The BLS recently published a chartbook describing fatal work injury data from 1995 through 1999 for the nation and for each state.[17] The charts illuminate the details of fatal injuries from a variety of perspectives.

Counting fatalities

The CFOI count of work-related fatalities differs in important ways from other workplace fatality statistics. The CFOI is a count of all work-related deaths caused by injuries, and excludes deaths caused by illnesses. Fatalities to all workers, including self-employed workers, are tabulated in the state of occurrence. Thus, a truck driver from Minnesota, who works for a Minnesota trucking company, killed in an accident in Texas, would be counted as a Texas CFOI fatality.

The workers' compensation count of fatality claims includes only workers covered by a Minnesota workers' compensation insurance policy. Self-employed workers are not included. Fatalities caused by illnesses are included. A Minnesota truck driver killed in another state would be included in the Minnesota workers' compensation fatality count if Minnesota workers' compensation benefits were paid. In 2003, there were 38 workers' compensation fatality claims.

MNOSHA investigated 27 fatalities in 2003. MNOSHA investigates all employee deaths that are under MNOSHA jurisdiction and result from an accident or illness caused by or related to a workplace hazard. Not included are fatalities caused by traffic accidents, airplane crashes, mining accidents, farm accidents and accidents to the self-employed, federal workers and railroad workers.

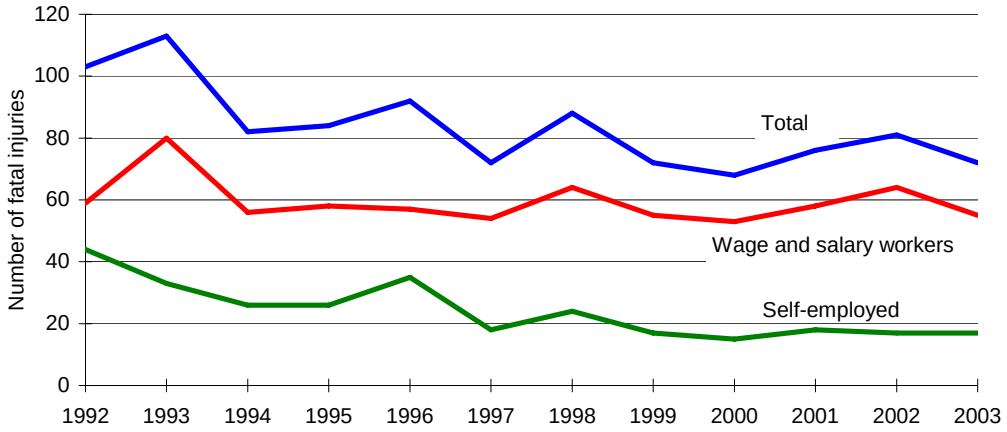
MNOSHA investigates fatalities to determine cause, whether any MNOSHA standards were violated, and whether additional standards might help prevent similar incidents.

[17] Fatal occupational injuries in the United States, 1995-1999. U.S. Department of Labor, Bureau of Labor Statistics, 2003. Report 965. This report is available at no charge and can be ordered from the Chicago BLS office at (312) 353-1880.

Number and rate of fatal injuries

- Figure 5.1 shows Minnesota had from 68 to 113 fatal work injuries a year from 1992 through 2003.
- For wage-and-salary workers, the annual fatality toll ranged from 53 to 64, except for 1993, when it reached 80.
- For self-employed workers, the annual fatality figure ranged from 15 to 44. The drop in fatalities of self-employed workers since 1996 has been the main source of the decrease in total annual fatalities between 1996 and 2000.
- The fatality toll for 1999 through 2003 was 369, an average of nearly 74 workers a year. This consisted of 57 wage-and-salary workers and 17 self-employed workers.
- Fatal injuries for the self-employed were 24 percent of the 2003 total, far higher than the 8 percent self-employed share of total state employment.[18]
- Figure 5.2 shows the Minnesota fatality rate since 1992. The 2003 fatality rate was 2.6 deaths per 100,000 employed, a 10 percent decrease from the 2002 rate of 2.9. The long-term trend in Minnesota's fatality rate has been downward since the early 1990s.
- The fatality rate for self-employed workers (7.7) was more than three times higher than the rate for wage-and-salary workers (2.2). This is consistent with national patterns.[19]
- For the entire United States, the fatality rate for 2003 was 4.0 deaths per 100,000 employed, unchanged from the rate in 2002.

Figure 5.1 Fatal work injuries, Minnesota, 1992-2003[1]

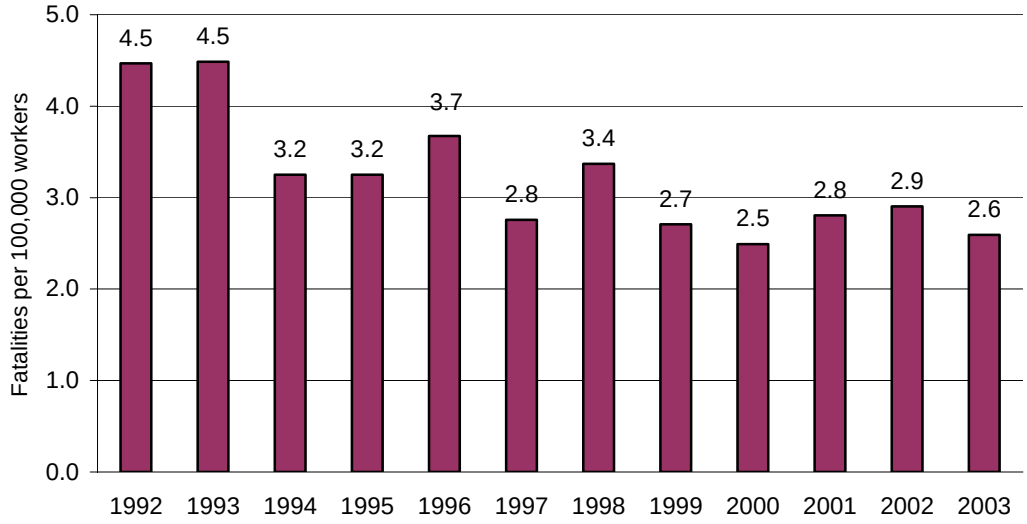


[1] Includes private sector plus local, state and federal government (including resident armed forces). Includes self-employed and unpaid family workers, including family farm workers. Excludes fatal illnesses.

Year of death	Wage & salary workers	Self-employed	Total
1993	80	33	113
1997	54	18	72
2001	58	18	76
2002	64	17	81
2003	55	17	72
Avg. 1999-2003	57.0	16.8	73.8

[18] Geographic Profiles bulletin of Current Population Survey data from BLS for 2003.
[19] Stephen M. Pegula, Occupational fatalities: self-employed workers and wage and salary workers. *Monthly Labor Review*, March 2004, pp 30-40.

Figure 5.2 Fatalities per 100,000 workers,[1] Minnesota, 1992-2003



1. Fatalities and workers exclude workers under age 16 or in the military.

Fatalities by metropolitan area

The CFOI program also produces fatality counts for metropolitan areas, even those that cross state boundaries. The number of fatalities within the metropolitan areas is strongly influenced by the types of industries and occupations concentrated in each area. This is one reason why the Minneapolis-St. Paul-Bloomington metropolitan area, with nearly 13 times the population of the Duluth metropolitan area, has less than three times the number of fatalities.

Figure 5.3 Number of fatal work injuries for metropolitan areas, 2003

Metropolitan area	Counties	Annual average employment, 2003[1]	Fatalities[2]
Duluth, MN-WI	MN--Carlton, St. Louis; WI--Douglas	136,025	7
Fargo, ND-MN	ND--Cass; MN--Clay	107,282	4
Grand Forks, ND-MN	ND--Grank Forks; MN--Polk	53,147	--
Minneapolis-St. Paul-Bloomington, MN-WI	MN--Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, Wright; WI--Pierce, St. Croix	1,742,489	20
Rochester, MN	MN--Dodge, Olmsted, Wabasha	98,603	3
St. Cloud, MN	MN--Benton, Stearns	98,361	5

[1] Employment estimates from the Local Area Unemployment Statistics program of the Bureau of Labor Statistics.

[2] "--" indicates that no data was reported or that the number of fatalities does not meet publication criteria.

Fatalities by industry sector

Figure 5.4 shows the number of Minnesota's fatal work injuries by industry sector for 2003.

- The highest number of fatal injuries was in agriculture, forestry, fishing and hunting. Agricultural crop production accounted for 15 of the 19 fatalities in that sector.
- The number of fatalities in construction has varied from a high of 23 fatalities in 1998, to a low of 10 fatalities in 1997 and 2003.
- Manufacturing, with five fatalities in 2002, posted its lowest number of fatalities since the CFOI started in 1991.

Figure 5.4 Number of fatal work injuries by industry sector, Minnesota, 2003

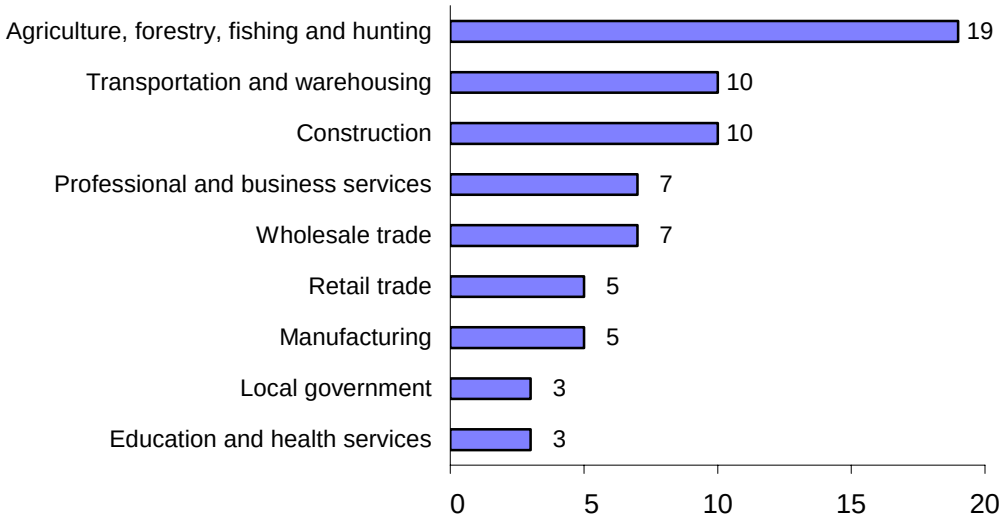


Figure 5.5 Event or exposure causing fatal work injury, Minnesota, 2003[1]

Event or exposure	Number of fatalities	Percentage of fatalities
Total	**72**	**100.0%**
Transportation accidents	**30**	**41.7%**
Highway accident	18	25.0%
Collision between vehicles, mobile equipment	7	9.7%
Moving in opposite directions, oncoming	4	5.6%
Noncollision accident	8	11.1%
Jack-knifed or overturned--no collision	6	8.3%
Nonhighway accident, except rail, air, water	5	6.9%
Noncollision accident	5	6.9%
Overturned	3	4.2%
Pedestrian, nonpassenger struck by vehicle, mobile equipment	5	6.9%
Contact with objects and equipment	**18**	**25.0%**
Struck by object	12	16.7%
Struck by falling object	11	15.3%
Caught in or compressed by equipment or objects	4	5.6%
Caught in running equipment or machinery	3	4.2%
Falls	**11**	**15.3%**
Fall to lower level	9	12.5%
Assaults and violent acts	**9**	**12.5%**
Assaults and violent acts by person(s)	7	9.7%
Shooting	5	6.9%

1. Includes private sector plus local, state and federal government (including resident armed forces). Includes self-employed and unpaid family workers, including family farm workers. Excludes fatal illnesses.

Characteristics of fatal injury events

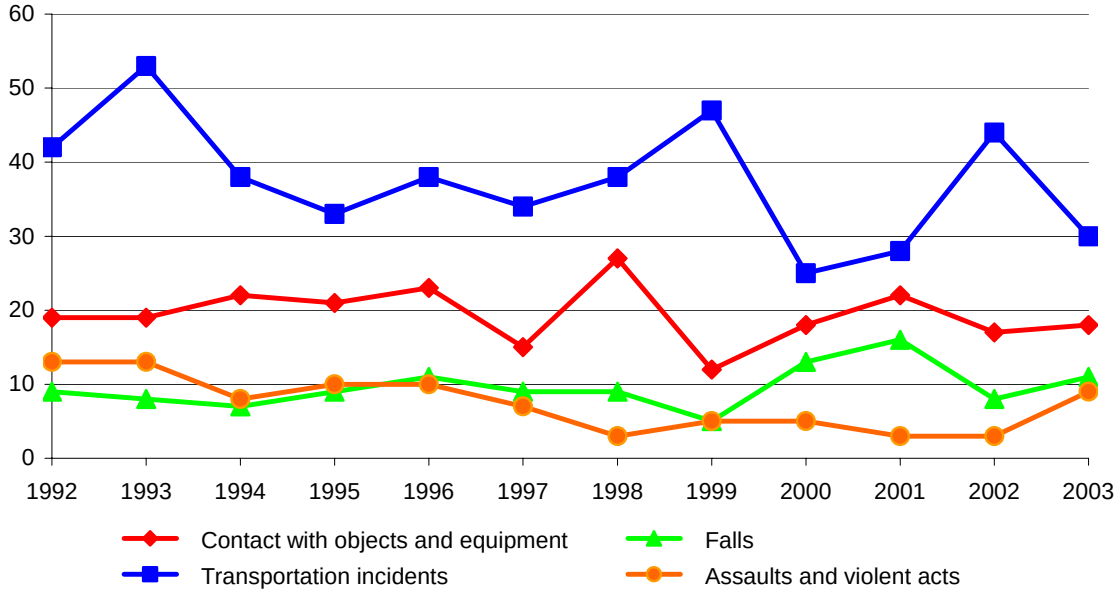
Fatal occupational injuries are described by the type of event causing the fatality, the source of the fatal injury, and the workers' location and activity. Figure 5.5 shows the event or exposure causing fatal work injuries in Minnesota during 2003.

- The most common event causing fatal injuries was transportation incidents, accounting for 42 percent of all fatal work injuries. These incidents consisted primarily of highway incidents (motor vehicles traveling on roads), but also included nonhighway incidents (motor vehicles on farm and industrial premises) and workers being struck by vehicles. The 2003 percentage is slightly lower than the 1988 through 2002 average of 47 percent.
- The second most frequent cause was contact with objects and equipment (25 percent). These cases included workers being struck by an object, caught in or compressed by equipment or objects, such as running machinery, and caught in or crushed by collapsing materials, as in trench cave-ins. The 2003 percentage is the same as the 1998 through 2002 average.
- Assaults and violent acts accounted for 13 percent of the workplace fatalities, more than double the 1998 through 2002 average of 5 percent. Assaults accounted for three of the four taxi service fatalities. Homicide, mostly by shooting, was the most frequent type of assault and violent act.

- The most common sources of the fatalities were highway vehicles (32 percent); floors, walkways and ground surfaces (15 percent); and plant and industrial powered vehicles, including tractors (11 percent).

- Figure 5.6 shows the trend in the numbers of fatalities among the major event categories. Since 1999, the relative order of the events has remained constant, with assaults approaching the number of falls in 2003.

Figure 5.6 Fatal occupational injury events, Minnesota, 1992-2003



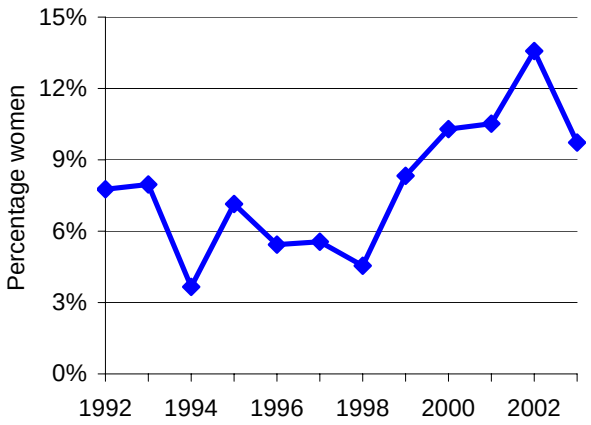
Characteristics of fatally injured workers

Figures 5.7 through 5.10 show the distributions of demographic characteristics and occupations of fatally injured workers.

Gender

- Men accounted for 90 percent of fatally injured workers in 2003. Since 2000, women have accounted for about 10 percent more of the fatally injured workers.
- Eleven women, 14 percent of the total, were fatally injured in 2002, the highest annual total ever in the CFOI program, which started in 1991.
- Four of the seven fatalities to women in 2003 were due to transportation accidents.

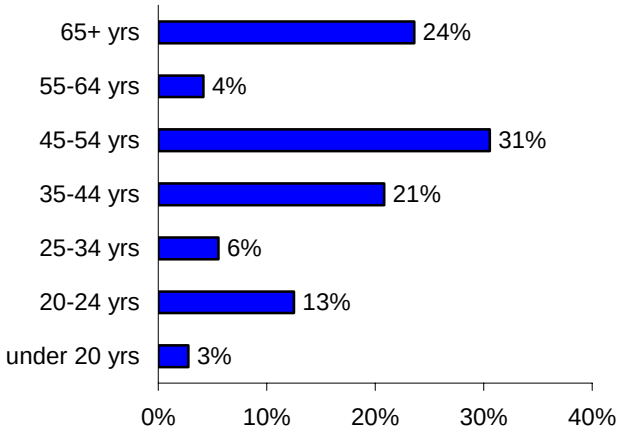
Figure 5.7 Gender of fatally injured workers, Minnesota, 1992-2003



Age

- Fatally injured workers had a wide age distribution, with the greatest numbers among workers 45 to 54 years of age and 64 years and older.
- The age of fatally injured workers has been gradually increasing, matching the aging of the entire workforce. The percentage of fatalities to workers 45 years and older increased from 47 percent during the 1992 to 1996 period, to 51 percent during the 1998 to 2002 period. In 2003, workers 45 years and older accounted for 58 percent of the fatalities.

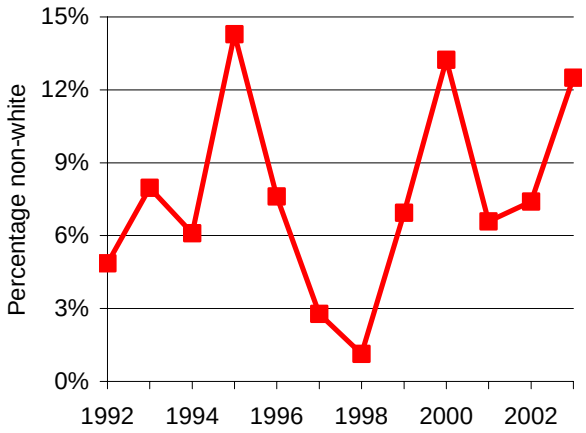
Figure 5.8 Age of fatally injured workers, Minnesota, 2003



Race

- White workers accounted for 88 percent of the fatalities in 2003.
- In the transportation and warehousing industry, three of the 10 fatalities were to nonwhite workers.
- Since 1998, the percentage of fatalities to nonwhite workers has ranged from 1 percent to 13 percent, with considerable annual variation.

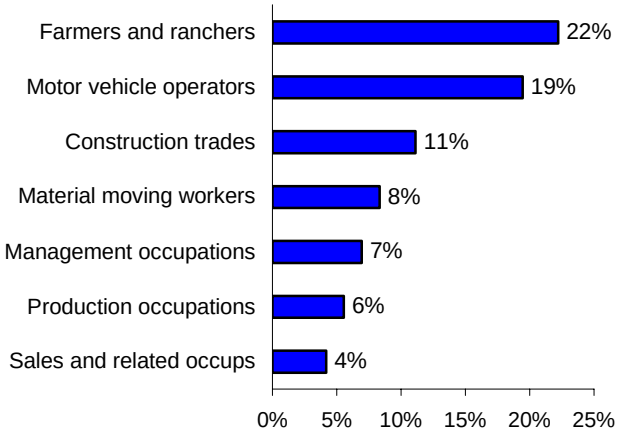
Figure 5.9 Race of fatally injured workers, Minnesota, 1992-2003



Occupation

- Fatally injured workers were concentrated in the occupation groups of farmers and ranchers and motor-vehicle operators.
- The most common occupations among the motor-vehicle operators were truck drivers and taxi drivers.
- All three of the sales worker fatalities and three of the four taxi driver fatalities were due to assaults.

Figure 5.10 Occupation of fatally injured workers, Minnesota, 2003



Worker activity

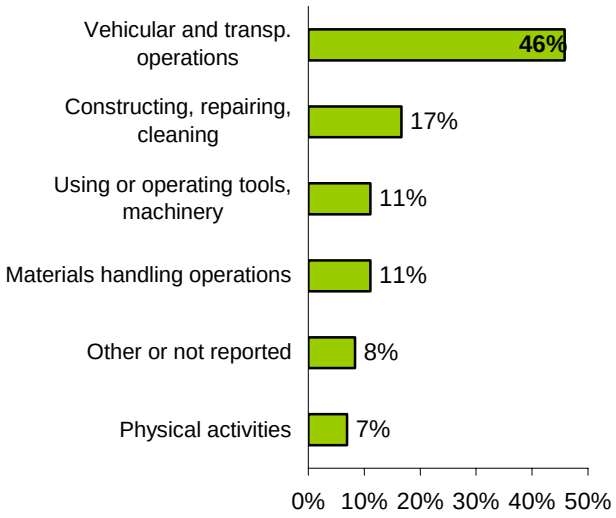
The worker activity results indicate the broad category of the fatally injured worker's activity at the time of the event.

- Nearly half of the fatalities in 2003 occurred while the workers were operating vehicles. This category accounted for 29 of the 30 transportation accident fatalities.

- Vehicular and transportation operations accounts for 8 of the 10 fatalities in both the construction and transportation and warehousing industries.

- The next most common activity, constructing, repairing and cleaning, was the most common worker activity among the fatalities in agriculture and in manufacturing.

Figure 5.11 Activity of fatally injured workers, Minnesota, 2003



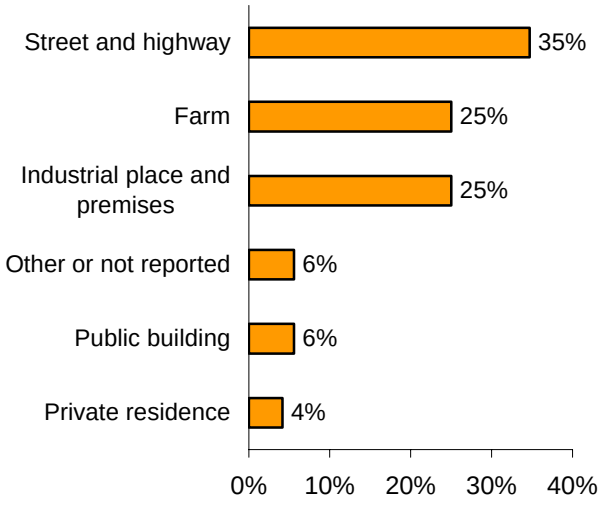
Location

The location of the fatality indicates, in broad terms, the type of place where the fatal event occurred.

- Consistent with the high proportion of fatalities due to transportation accidents, the most common event location was a street or highway.

- Farms and industrial worksites each accounted for another one-fourth of the fatalities.

Figure 5.12 Fatal incident location, Minnesota, 2003



6

Workplace safety programs and services of the Department of Labor and Industry

The Department of Labor and Industry (DLI) has a variety of programs and services to help employers maintain safe and healthful workplaces. Minnesota has an approved state occupational safety and health plan under the federal Occupational Safety and Health Act (OSHA). Minnesota operates its plan under the Minnesota Occupational Safety and Health Act of 1973 (MNOSHA) and its related standards.

DLI administers MNOSHA through two work-units, each with a focus on different parts of MNOSHA. The Compliance unit is responsible for compliance program administration, which includes conducting enforcement inspections, adoption of standards and operation of other related MNOSHA activities. The Workplace Safety Consultation (WSC) unit provides free consultation services, on request, to help employers prevent workplace injuries and illnesses by identifying and correcting safety and health hazards. Both divisions provide information about workplace safety and health standards.

Further information

For further information about MNOSHA requirements, standards and procedures, contact the Compliance unit by phone at (651) 284-5050 or 1-877-470-6742, by fax at (651) 284-5741, by e-mail at OSHA.Compliance@state.mn.us, and on the Web at www.doli.state.mn.us/mnosha.html.

For further information about WSC services and programs, contact WSC by phone at (651) 284-5060 or 1-800-657-3776, by fax at (651) 284-5739, by e-mail at OSHA.Consultation@state.mn.us or on the Web at www.doli.state.mn.us/wsc.html.

Occupational safety and health compliance

Workplace inspections

The department conducts workplace inspections to determine whether employers are complying with safety and health standards. The inspectors are trained about OSHA standards and the recognition of safety and health hazards. With certain exceptions, inspections are required to be without advance notice. Employers are required to allow the inspector to enter work areas without delay and must otherwise cooperate with the inspection.

MNOSHA's compliance program is based on a system of inspection priorities. The priorities, from highest to lowest, are:

- imminent danger (established from reports by employees or the public or from observation by an OSHA compliance investigator),
- fatal accidents and catastrophes (accidents causing hospitalization of three or more employees),
- employee complaints (not concerning imminent danger),
- programmed inspections (which target high-hazard employers and industries), and
- follow-up inspections (for determining whether previously cited violations have been corrected).

Employers found to have violated MNOSHA standards receive citations for the violations and are assessed penalties based on the seriousness of the violations. These employers are also required to correct the violations. Employers and employees may appeal citations, penalties and the time periods allowed for correcting violations.

Figure 6.1 shows statistics for compliance inspections from federal fiscal years (FFY) 1996 through 2004. More statistics describing MNOSHA activity are available from the MNOSHA annual report, on the Web at www.doli.state.mn.us/pdf/osha2004report.pdf.

- During the most recent five-year period, FFY 2000 through FFY 2004, an average of 2,180 inspections were conducted annually, covering an average of 89,000 workers. The number of inspections and employees covered by the inspections increased dramatically from 2002 to 2003 and increased slightly during 2004. This increase was the result of a shift of six compliance officers to field inspections and a determined effort to increase the number of inspections.

- The increase in the number of inspections conducted in FFY 2003 was due to an increased emphasis on field inspections. The number of safety inspections per 100 hours of inspector work time increased from 2.8 inspections in 2002, to 4.1 inspections in 2003.

- During FFY 2004, 70 percent of inspections resulted in at least one violation. Among inspections with violations, an average of 2.6 violations were cited.

- A total of 20,884 violations were cited from FFY 2000 through FFY 2004, resulting in an average annual assessment of $3.1 million.

- Serious, willful and repeat violations accounted for 82 percent of the violations cited in FFY 2004.

- As shown in Figure 6.2, the majority of inspections in most industries were planned, programmed inspections.

- The construction industry accounted for 54 percent of the inspections and for 35 percent of the violations.

- Manufacturing accounted for 27 percent of the inspections and for 45 percent of the violations.

- During 2004, MNOSHA Compliance initiated inspections for 23 fatalities. Since 2000, 38 percent of the fatality investigations have been in the construction industry. Falls and crushing incidents accounted for 60 percent of the fatalities investigated.

- During 2004, MNOSHA Compliance initiated inspections for 26 serious-injury incidents. Since 2000, workers injured by falls and crushing incidents and injuries resulting in amputation have accounted for 70 percent of the serious injuries investigated. Additional details about the fatality and serious injury incident investigations are available at www.doli.state.mn.us/oshainfo.html.

- The MNOSHA Compliance unit also performs outreach activities. Compliance staff members present information about MNOSHA standards and other workplace safety topics to employer organizations, safety professionals, unions and labor-management organizations. During FFY 2004, Compliance staff members participated in 47 outreach sessions with 2,372 people in attendance.

- Construction safety is a major focus for both the inspections and outreach efforts. The majority of programmed inspections were conducted at construction worksites. Five construction safety breakfasts were organized, with 312 construction managers and supervisors in attendance.

- MNOSHA established the 75/25 program in FFY 2004. This is a penalty-reduction incentive program available to qualified employers that links workers' compensation claims and MNOSHA compliance penalties. This program allows an employer to obtain a 75 percent reduction in penalties if that employer reduces the number of workers' compensation claims by 25 percent within a one-year period. Participants are encouraged to use WSC services to achieve this goal. More information about this program is available on the MNOSHA Web pages at www.doli.state.mn.us/75_25program.html.

Figure 6.1 Minnesota OSHA Compliance inspections

Federal fiscal year [1]	Inspections conducted	Employees covered [2]	Inspections with violations	Violations	Penalties assessed ($ millions)[3]
1996	2,131	76,882	1,217	4,029	$2.48
1997	1,775	64,515	964	2,786	$1.90
1998	2,062	73,898	1,291	3,829	$2.76
1999	1,876	103,029	1,255	3,957	$3.15
2000	1,991	84,575	1,368	4,068	$3.28
2001	1,953	73,451	1,342	3,855	$3.29
2002	1,691	68,113	1,165	3,462	$2.61
2003	2,604	107,314	1,797	4,653	$2.83
2004	2,663	112,648	1,872	4,846	$3.52

1. Federal fiscal years are from Oct. 1 of the preceding year to Sept. 30 of the indicated year.
2. "Employees covered" refers to the number of employees who were affected by the scope of the inspection, but not always all employees at a facility.
3. These are the originally assessed amounts of penalties.

Source: OSHA Integrated Management Information System.

Figure 6.2 Minnesota OSHA Compliance inspections by industry, FFY 2004

Industry	NAICS code(s)	Initial inspections	Planned programmed Inspections conducted	Number of Violations	Penalties assessed[1]
Natural resources and mining	11, 21	0	0	0	--
Agriculture, forestry, fishing and hunting	11	5	4	3	$ 420
Construction	23	1,436	1,335	1,720	$ 925,642
Manufacturing	31-33	715	572	2,163	$ 1,230,460
Trade, transportation, and utilities	42, 44-45,48-49,22	253	171	523	$ 229,560
Wholesale trade	42	70	54	173	$ 77,672
Retail trade	44-45	94	57	194	$ 107,459
Transportation and warehousing	48-49	79	54	137	$ 32,689
Utilities	22	10	6	19	$ 11,740
Information	51	6	4	8	$ 4,795
Financial activities	52-53	6	1	14	$ 5,385
Professional and business services	54-56	41	11	20	$ 72,852
Education and health services	61-62	76	38	99	$ 143,660
Health care and social assistance	62	34	12	42	$ 109,430
Leisure and hospitality	71-72	24	18	16	$ 55,850
Other services	81	46	31	110	$ 75,061
State government	all	7	2	6	$ 2,835
Local government	all	98	69	140	$ 83,202

1. These are the originally assessed amounts of penalties.

Source: OSHA Integrated Management Information System.

Figure 6.3 shows the most commonly cited OSHA standards violations for 2004.

- Violations associated with compliance with the A Workplace Accident and Injury Reduction (AWAIR) Act and the Employee Right-To-Know Act were the most commonly cited standards.

Under the AWAIR Act — also part of the state's Occupational Safety and Health Act — employers in high-hazard industries must develop and implement a written safety and health plan to reduce workplace injuries and illnesses.

Under the Employee Right-To-Know Act and its standards — part of the state's Occupational Safety and Health Act — employers must evaluate their workplaces for the presence of hazardous substances, harmful physical agents and infectious agents, and determine which employees are routinely exposed to these substances and agents. Identified employees must be provided with appropriate training and readily accessible written information about identified hazardous substances and agents in their work areas. Containers, work areas and equipment must be labeled to warn employees of associated hazardous substances or agents.

Figure 6.3 Minnesota OSHA's most frequently cited standards, 2004

Standard[1]	Description	Frequency
MN Statutes 182.653 subd. 8	A Workplace Accident and Injury Reduction (AWAIR) program	258
MN Rules 5206.0700 subp.1B	Employee Right-To-Know written program deficiencies	154
MN Rules 5206.0700 subp.1	Develop and implement written Employee Right-To-Know program	141
29 CFR 1926.501(b)(1)	Fall protection in construction — general requirements	130
MN Statutes 182.653 subd. 2	General Duty Clause — unsafe working condition	125
29 CFR 1926.501(b)(13)	Fall protection in residential construction	125
29 CFR 1910.147(c)(4)	Development and use of lockout/tagout procedures	115
29 CFR 1910.151(c)	Emergency eyewash/shower facilities	105
29 CFR 1910.212(a)(1)	Machine guarding — general requirements	105
MN Rules 5205.0116 subp. 1 & 2	Forklifts — monitoring for carbon monoxide	102
29 CFR 1926.451(g)(1)	Fall protection on scaffolds above 10 feet	101
MN Rules 5206.0700 subp.1G	Employee Right-To-Know training frequency	88
29 CFR 1910.178(l)	Forklifts — operator training	83
29 CFR 1926.100(a)	Hard hats in construction	83
29 CFR 1910.134(a)(2)	Respiratory protection program	82
29 CFR 1910.242(b)	Compressed air used for cleaning	73

1. 29 CFR refers to the U.S. Code of Federal Regulations Title 29, which covers the U.S. Department of Labor.

Source: OSHA Integrated Management Information System.

Workplace Safety Consultation

WSC offers a variety of workplace safety services. These services are voluntary, confidential and separate from the MNOSHA Compliance unit.

Workplace consultations

WSC offers free consultation services to help employers prevent workplace accidents and diseases by recognizing and correcting safety and health hazards. This service is targeted primarily toward smaller businesses in high-hazard industries, but is also available to public-sector employers. During FFY 2004, WSC conducted 1,769 worksite safety and health visits, training and assistance visits, and interventions.

WSC safety and health professionals conduct the on-site consultations. During consultations, employers are assisted in determining how to improve workplace conditions and practices to comply with MNOSHA regulations and to reduce accidents and illnesses and their associated costs. The consultants make recommendations dealing with all aspects of an effective safety and health program.

No citations are issued or penalties proposed as a result of WSC consultations. Employers are obligated to correct, in a timely manner, any serious safety and health hazards found. Consultants identify hazards in 97 percent of the visits. Information about an employer is not reported to the MNOSHA Compliance unit, unless the employer fails to correct the detected safety and health hazards within a specified period. This has happened only once in the past nine years.

Figure 6.4 shows statistics for WSC visits to worksites for FFY 1996 through 2004.

- During the past four years, WSC has annually conducted more consultations, identified more hazards for more potential penalties and conducted more training and intervention visits than during the previous five-year period.

- WSC visits in 2004 resulted in the identification and correction of safety and health hazards that would have cost employers approximately $3.3 million in MNOSHA penalties. This averages to nearly $3,500 for each onsite consultation.

Figure 6.5 shows statistics for WSC services to worksites for some industries during FFY 2004.

- Similar to MNOSHA Compliance, visits to construction sites accounted for 47 percent of initial visits.

- Manufacturing and health care workplaces accounted for many of the remaining consultation visits and training contacts.

Safety and health seminars

WSC provides seminars to help employers and employees understand and comply with safety and health regulations and to develop and implement mandatory programs, including Employee Right-To-Know, AWAIR and labor-management safety committees. The seminars provide information that safety directors, supervisors, safety committee members and employees can use to help train their coworkers. Many of the WSC seminars are coordinated and conducted with nine training-partner organizations throughout the state, which include community and technical colleges, labor-management associations and government training centers.

During FFY 2004, WSC conducted 39 safety and health seminars for 655 participants. WSC speakers also participated in the construction safety breakfast seminars.

Labor-management safety committees

MNOSHA also requires all public and private employers with more than 25 employees, and smaller employers in high-hazard industries, to establish and use a joint labor-management safety committee. Employees must select their safety committee representatives and the committee must meet regularly.

The WSC Labor-Management Safety Committee program emphasizes safety committee structure through a joint effort with the state Bureau of Mediation Services. This program reinforces the importance of labor-

Figure 6.4 Minnesota Workplace Safety Consultation visit activity

Federal fiscal year[1]	Number of consultations conducted	Employees covered[2]	Number of visits with identified hazards	Number of training and intervention visits	Potential penalties avoided ($ millions)
1996	387	20,912	331	208	$1.81
1997	470	75,071	346	225	$1.60
1998	535	63,579	413	404	$2.53
1999	625	62,816	554	364	$2.73
2000	790	88,016	736	505	$2.43
2001	835	61,191	715	456	$2.93
2002	971	77,988	882	482	$3.23
2003	1,026	64,985	877	832	$3.48
2004	953	47,798	761	816	$3.30

1. Federal fiscal years are from Oct. 1 of the preceding year to Sept. 30 of the indicated year.
2. "Employees covered" refers to the number of employees affected by the scope of the consultation visit.

Source: OSHA Integrated Management Information System.

Figure 6.5 Minnesota Workplace Safety Consultation visit activity by industry, FFY 2004

Industry	NAICS code(s)	Initial visits	Number of workers at initial visit sites	Training and intervention visits	Outreach participants
Logging	113310	41	92	147	3,343
Construction	23	452	11,496	264	4,757
Manufacturing	31-33	130	16,704	267	4,481
Nursing and residential care	623	58	10,210	72	988
All other industries		272	9,296	66	5,390
Total		953	47,798	816	18,959

Source: OSHA Integrated Management Information System.

management cooperation in workplace safety issues to help prevent workplace injuries. Services include interpretation of OSHA standards, training in self-inspection techniques and instruction for preparing and implementing education and training programs.

WSC provides training to companies and large groups about the elements of effective labor-management safety committees. During FFY 2004, WSC conducted 81 training and assistance sessions and five visits for 1,256 participants.

Loggers' safety education program

WSC also provides one-day logger safety training (LogSafe) seminars throughout the state. To receive workers' compensation premium rebates from the Targeted Industry Fund, logging employers must maintain current workers' compensation insurance and they or their employees must have attended, during the previous year, a Logsafe seminar or a seminar approved by DLI. WSC conducted 21 LogSafe seminars and 138 training interventions during FFY 2004, attended by 6,061 logging employers and employees.

Additionally, WSC conducts training sessions for public-sector employers and employees who are involved in tree removal following storms or other circumstances. In many cases, the trees are damaged and hazardous to work with for workers not routinely doing logging.

Safety Grants Program

The Safety Grants Program is a state-funded program that awards funds up to $10,000 to qualifying employers for projects designed to reduce the risk of injury and illness to their employees. The project must be consistent with the recommendations of a safety and health inspection. Qualified applicants must match the grant money awarded.

During state fiscal-year 2004, WSC awarded $1.0 million to 196 employers. From 2000 through 2004, safety grants totaling $5.2 million were combined with $13.4 million in employer contributions for a total of $18.5 million in workplace safety improvements. State government units, nursing homes, manufacturers and construction employers were the most frequent recipients of safety grants.

Workplace Violence Prevention Program

The Workplace Violence Prevention Program, also state-funded, helps employers and employees reduce the incidence of workplace violence by providing on-site consultation, telephone assistance, education and training seminars, inspections and a resource center.

This program is targeted toward workplaces at high risk of violence, such as convenience stores, service stations, taxi and transit operations, restaurants and bars, motels, guard services, patient care facilities, schools, social services, residential care facilities and correctional institutions.

In FFY 2004, WSC presented 56 violence prevention outreach presentations, covering 2,028 employers and employees.

WSC has partnered with the Minnesota Corporation Citizenship Initiative program to help develop information for employers about how to address domestic violence in the workplace.

Ergonomics assistance

In response to recommendations made by the Ergonomics Task-Force, which convened during the summer of 2002, WSC added two ergonomic specialist positions to help employers reduce the occurrence of work-related musculoskeletal disorders (WMSDs). The main responsibilities of the positions are to educate Minnesota employers and employees about the recognition and control of risk factors associated with WMSDs. This is being accomplished through development of training and education presentation and materials, on-site ergonomics evaluations, and posting resources on the WSC Web pages.

In an effort to maximize the effect of the on-site ergonomics evaluations, the initial efforts have focused on the nursing home industry. Detailed measurements are being taken as part of this industry focus, in order to help WSC learn how to improve ergonomics-related services and to evaluate the changes at the nursing homes. The WSC ergonomists have enlisted 26 nursing homes in this effort that have now received comprehensive safety and health on-site visits.

MNSHARP

The Minnesota Safety and Health Achievement Recognition Program (MNSHARP) is a voluntary program that assists small high-hazard employers in achieving safety and health improvements and recognizes them for doing so. For program purposes, high-hazard employers are those in high-hazard industries (e.g., construction and food processing) or special-emphasis industries (e.g., fabricated metals manufacturing and nursing homes) and those with higher-than-average lost-workday injury and illness rates for their industry. Eligibility is limited to employers with fewer than 500 workers at the worksite and priority is given to employers with fewer than 100 workers.

MNSHARP participants receive a comprehensive safety and health consultation survey from WSC, which results in a one-year action plan. Within a year, in consultation with WSC, participants must correct hazards identified in the initial survey and develop and implement an effective safety and health program with full employee involvement. Achievement of MNSHARP status requires that the employer's total injury and illness rate and DART case rate are below the national industry average for at least one year. Participants must also consult in advance with WSC about changes in work processes or conditions that might introduce new hazards.

After a year, a second on-site visit occurs to determine whether the employer has met these requirements and the injury and illness reduction goal. If so, the employer receives a MNSHARP "Certificate of Recognition" and is exempted from programmed MNOSHA Compliance inspections for one year. (Inspections will occur in the event of imminent danger, fatalities or other catastrophes, formal complaints or referrals, or as follow-up to previously cited violations.)

Certified MNSHARP employers may apply annually for certification renewal. If an on-site survey by WSC determines the employer continues to meet program requirements, the employer's certification is renewed and it continues to be exempt from programmed MNOSHA Compliance inspections.

Eight MNSHARP employers certified in earlier years retained certification in FFY 2004. Five new employers joined the program in FFY 2004. Eight of the 13 employers are manufacturers. Another nine employers are in MNSHARP deferral status, during which they must complete their action plan.

On average, the total case incidence rate of the 13 employers in MNSHARP was 44 percent below the national rate for their industry, and the DART rate was 36 percent below the national rate.

MNSTAR

MNSTAR is a voluntary program patterned after the federal Voluntary Protection Program.[20] It is available to Minnesota employers of all sizes. In comparison with MNSHARP, MNSTAR has more rigorous requirements and confers a higher level of recognition on certified employers. There are currently 14 MNSTAR employers.

MNSTAR relies mainly on employer self-assessment and requires an extensive application, including submission of written safety and health policies and procedures. After one or more on-site safety and health surveys, the employer will qualify for MNSTAR status if all eligibility requirements have been met, including an injury and illness rate below the state and national averages for the industry. MNSTAR recognition exempts the employer from programmed MNOSHA Compliance inspections for three years.

[20] See www.osha.gov/oshgrogs/vpp

MNOSHA performance

Minnesota OSHA sets out its strategic and performance goals to measure its progress in five-year strategic plans. Some of the performance goals use BLS survey results. In this section of the report, performance measures relating to the 1999 to 2003 and 2004 to 2008 strategic plans are reviewed.

1999 to 2003 strategic plan

The Minnesota OSHA Strategic Plan for 1999 to 2003 included performance goals to reduce the lost-workday (LWD) injury and illness case rates by 15 percent in six high-hazard industries and in construction. The six industries were identified through a combination of factors, including the number of workers in the industry and the industry's LWD rate. Both the Compliance and Workplace Safety Consultation programs focused attention on these industries.

The six high-hazard industries are listed in Figure 6.6, along with construction, and the LWD rates and DART rates are presented. Percent changes in the LWD rates between the baseline period (1995 to 1997) and 2003 are not available because of the changes in the OSHA recordkeeping standards and the industry classification change from the SIC to the NAICS system. However, four of the industries showed substantial decreases in their LWD rates by 2001.

Looking at the DART rates associated with these industries in 2002 and 2003, there has been continued decreases in the rates, even in those industries that did not show substantial decreases by 2001. The overall result is that the DART rates for each of these industries are noticeably lower than the LWD rates during the baseline period.

Figure 6.6 MNOSHA high-hazard industry outcomes for the 1998-2003 strategic plan

Industry name	SIC code	Lost workday case rate 1995-97 avg. (baseline)	Lost workday case rate 2001	Pct. change baseline-2001[1]	DART rate 2002	DART rate 2003[2]
Construction	15-17	5.3	5.3	0%	5.1	4.3
Meat products manufacturing	201	14.0	9.7	-31%	9.4	7.7
Millwork, veneer, plywood & structural wood members	243	10.2	6.9	-32%	7.4	5.1
Primary metal industries[3]	33	11.5	11.3	- 2%	9.9	6.8
Fabricated structural metal products	344	6.8	4.9	-28%	7.7	5.5
Transportation equipment mfg.	37	11.7	9.5	-19%	10.0	9.3
Nursing and personal care facilities	805	10.8	11.7	8%	11.9	7.5

1. Percent changes for the entire period could not be calculated because of the change in OSHA recordkeeping requirements.

2. 2003 DART rate for NAICS industry corresponding to SIC category.

3. The lost workday case rate was not available for 2001, so the 2000 rate is reported.

2004 to 2008 strategic plan

The current Minnesota OSHA strategic plan has performance goals to reduce the days-away-from work (DAFW) case incidence rate by 15 percent for a set of inspection emphasis industries. The industries, listed in Figure 6.7, were identified through a combination of factors, including the number of workers in the industry and the industry's LWD rate.

There are a few differences in the industry list between the compliance and consultation programs. Compliance programs will include state and local government establishments. WSC programs will also focus attention on an extra set of secondary emphasis industries. For FFY 2004 and 2005, WSC programs used a different set of SIC industry divisions: construction, manufacturing, wholesale trade, transportation and utilities, and service.

The only rate available to use for the baseline period is for 2003, because the pre-2003 BLS rates are not directly comparable. The 2003 DAFW rates and case count estimates are shown in Figure 6.7.

The value of targeting these emphasis industries is shown at the bottom of Figure 6.7; these industries, which account for 23 percent of the work establishments and 32 percent of employment, account for nearly half of the DAFW cases.

Figure 6.7 Minnesota OSHA high-hazard industries for the 2004-2008 strategic plan

Industry name (NAICS)	NAICS code	Compliance inspection emphasis industry	WSC focus industry (P=primary, (S=second-ary)	Establish-ments 2003	Employment 2003	BLS DAFW rate 2003	BLS DAFW cases 2003
Logging	1133	x	P	197	813	na	na
Construction	23	x	P	17,457	132,060	2.8	2,870
Food manufacturing	311	x	P	764	46,090	1.4	620
Animal slaughtering and processing[1]	3116		P	134	15,978	1.6	260
Wood product manufacturing	321	x	P	377	16,724	2.6	410
Paper manufacturing	322	x	P	139	13,151	1.6	210
Printing and related support activities	323	x	P	1,001	30,795	1.4	430
Plastics and rubber products mfg.	326	x	P	416	16,979	1.5	240
Foundries	3315	x	P	54	4,656	2.4	150
Architectural and structural metals manufacturing	3323		S	306	8,335	2.9	240
Machinery manufacturing	333	x	P	891	34,600	1.2	420
Motor vehicle manufacturing	3361		S	11	2,663	3.5	100
Lumber and other construction materials merchant wholesalers	4233		S	303	5,428	4.0	200
Motor vehicle and parts dealers	441	x	S	906	23,149	1.2	380
Gasoline stations	447	x	S	2,702	25,770	1.6	280
Couriers and messengers	492		S	318	10,592	5.3	440
Telecommunications	517	x	S	868	15,582	0.9	130
Nursing care facilities[2]	6231	x	P	382	45,985	3.1	1,700
Traveler accommodations	7211	x	S	1,304	30,838	1.5	230
State and local government	all	x		6,210	335,722	1.6	4,310
Emphasis industry total				35,320	812,371		13,660
State total (excluding federal government)				156,768	2,542,965	1.5	29,860
Percentage of state total				23%	32%		46%

1. Animal slaughtering and processing is an industry group in the food processing subsector.

2. DAFW numbers and rates are not available for this industry; the rate for the 3-digit NAICS industry is reported, and the number of DAFW cases is estimated.

Appendix A

Major changes to OSHA's recordkeeping rule in 2002

To remove some of the subjectivity involved in making decisions about what injuries and illnesses employers need to record on the *OSHA Log of Work-Related Injuries and Illnesses*, OSHA instituted changes in its recordkeeping requirements, which became effective Jan. 1, 2002. By improving the consistency in recordkeeping by employers, these changes should also improve the quality of the estimates produced by the BLS *Survey of Occupational Injuries and Illnesses*, which relies on the OSHA log records.

To disseminate information about the new recordkeeping requirements, all employers participating in the 2002 BLS survey were sent new OSHA log packets with introductory material. During 2002, the Workplace Safety Consultation unit of MNOSHA traveled throughout the state, conducting 53 training sessions about the new recordkeeping requirements.

Additional information about the new recordkeeping requirements and the changes to the OSHA log for 2004 is available on the DLI Web site at www.doli.state.mn.us/recordkeeping.html.

The following are some of the major changes and how they might affect the estimates produced by the BLS survey.

- Where a pre-existing (non-work-related) condition is present, a case is recordable only if a significant aggravation by a workplace event or exposure occurs. A significant aggravation is any of the following, if caused by the occupational event or exposure:
    1. death;
    2. loss of consciousness;
    3. one or more days away from work;
    4. one or more days of restricted work or job transfer; or
    5. medical treatment.

  Under the old requirements, any aggravation of a pre-existing condition by a workplace event or exposure makes a case recordable. This change clarifies when to record cases involving pre-existing conditions. **This change tends to reduce the number of cases.**

- An aggravation of a case where signs or symptoms have not been resolved is not a new case, even if the aggravation was caused by a new event or exposure. Previously, each new event or exposure was treated as a new case. **This change tends to reduce the number of cases.**

- Under the previous requirements, a cumulative trauma disorder was considered a new case if no care was received for the previous 30 days. The new requirements have no such criteria. In the absence of a new work-related event or exposure, the reappearance of signs or symptoms may be treated as part of the previous case. **This change tends to reduce the number of cases.**

- Under the previous requirements, all work-related illnesses were recordable. Under the new requirement, work-related illnesses are recordable only if they meet the general recording criteria applicable to all injuries and illnesses. **This change tends to reduce the number of cases.**

- Restricted work activity occurs when an employee cannot perform all of his or her routine job functions, which are defined as any duty regularly performed at least once a week. The previous requirements defined normal job duties as any duty the worker would be expected to do throughout the calendar year. **This change tends to reduce the number of cases of restricted work activity.**

- Restricted work activity limited to the day of injury does not make a case recordable.

Under the previous requirements, restricted work limited to the day of injury was a recordable case. **This change tends to reduce the number of cases of restricted work activity and may also reduce the total number of cases.**

- The counting of days away from work and days of restricted work activity changed from workdays to calendar days. To the extent that employers previously only counted workdays, **this tends to increase the number of cases of days away from work and days of restricted work activity. This will also increase the number of *days* for both categories.**

- The new criteria allow employers to cap the number of days at 180. Previously, there was no cap on the count of days. This change will not affect the calculation of the median number of days away from work or the distribution of cases by days away from work.

- Changes and clarifications to what is considered first aid (not recordable) and what is considered medical treatment (recordable) may result in slight changes in the number of recordable cases. The new criteria include a comprehensive list of first aid, so that less discretion is needed to know when a case should or should not be recorded. To the extent that different employers may have interpreted treatments and first aid differently, **it is unclear how the total number of recordable cases will be affected**.

- A significant injury or illness diagnosed by a licensed health care provider is recordable, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid or loss of consciousness. This list includes cancer, chronic irreversible diseases, a fractured or cracked bone, or a punctured eardrum. The previous criteria only included fractures and second and third degree burns. **This may increase the total number of cases.**

- All work-related needlestick injuries and cuts from sharp objects that are contaminated with another person's blood or other potentially infectious material are recordable as injuries. Previously, these cases were recordable only if they met the criteria for all injuries or if sero-conversion was present. **This will increase the number of reported needlestick cases.**

- Work-related musculoskeletal disorders (WMSDs) are recordable when general recording criteria are met. Previously, WMSDs were recordable under the general criteria or when identified through a clinical diagnosis or diagnostic test. **This tends to reduce the number of WMSD cases.**

Appendix B

High-level NAICS industry structure

Establishments and employment[1] by NAICS supersectors and sectors, with list of subsectors

Industry		Private ownership		State government		Local government	
Supersector, sector and subsector	NAICS codes	Average number of establish-ments	Average number of employees	Average number of establish-ments	Average number of employees	Average number of establish-ments	Average number of employees
All industries		150,225	2,207,803	1,536	68,824	4,676	266,946
Natural resources and mining		2,002	21,080	4	97		
Agriculture, forestry, fishing and hunting	11xxxx	1,824	15,942	4	97		
Crop Production	111xxx						
Animal Production	112xxx						
Forestry and Logging	113xxx						
Fishing, Hunting and Trapping	114xxx						
Agriculture & Forestry Support Activity	115xxx						
Mining	21xxxx	178	5,139				
Oil and Gas Extraction	211xxx						
Mining (except Oil and Gas)	212xxx						
Support Activities for Mining	213xxx						
Construction		17,165	124,582	144	3,696	85	3,654
Construction	23xxxx	17,165	124,582	144	3,696	85	3,654
Construction of Buildings	236xxx						
Heavy and Civil Engineering Construction	237xxx						
Specialty Trade Contractors	238xxx						
Manufacturing		8,758	344,430				
Manufacturing	31xxxx	8,758	344,430				
Food Manufacturing	311xxx						
Beverage & Tobacco Product Manufacturing	312xxx						
Textile Mills	313xxx						
Textile Product Mills	314xxx						
Apparel Manufacturing	315xxx						
Leather and Allied Product Manufacturing	316xxx						
Wood Product Manufacturing	321xxx						
Paper Manufacturing	322xxx						
Printing and Related Support Activities	323xxx						
Petroleum & Coal Products Manufacturing	324xxx						
Chemical Manufacturing	325xxx						
Plastics & Rubber Products Manufacturing	326xxx						
Nonmetallic Mineral Product Mfg	327xxx						
Primary Metal Manufacturing	331xxx						
Fabricated Metal Product Manufacturing	332xxx						
Machinery Manufacturing	333xxx						
Computer and Electronic Product Mfg	334xxx						
Electrical Equipment and Appliances	335xxx						
Transportation Equipment Manufacturing	336xxx						
Furniture and Related Product Mfg	337xxx						
Miscellaneous Manufacturing	339xxx						

Industry		Private ownership		State government		Local government	
Supersector, sector and subsector	NAICS codes	Average number of establish-ments	Average number of employees	Average number of establish-ments	Average number of employees	Average number of establish-ments	Average number of employees
Trade, transportation and utilities		38,960	518,703	1	7	190	7,428
Wholesale trade	42xxxx	312	11,945	1	7	47	1,369
Merchant Wholesalers, Durable Goods	423xxx						
Merchant Wholesalers, Nondurable Goods	424xxx						
Electronic Markets and Agents/Brokers	425xxx						
Retail trade	44xxxx	14,066	129,503			2	5
Motor Vehicle and Parts Dealers	441xxx						
Furniture and Home Furnishings Stores	442xxx						
Electronics and Appliance Stores	443xxx						
Building Material & Garden Supply Stores	444xxx						
Food and Beverage Stores	445xxx						
Health and Personal Care Stores	446xxx						
Gasoline Stations	447xxx						
Clothing and Clothing Accessories Stores	448xxx						
Sporting Goods/Hobby/Book/Music Stores	451xxx						
General Merchandise Stores	452xxx						
Miscellaneous Store Retailers	453xxx						
Nonstore Retailers	454xxx						
Transportation and warehousing	48xxxx-49xxxx	19,868	300,709			37	427
Truck Transportation	484xxx						
Transit and Ground Passenger Transport	485xxx						
Support Activities for Transportation	488xxx						
Postal Service	491xxx						
Couriers and Messengers	492xxx						
Warehousing and Storage	493xxx						
Utilities	22xxxx	4,715	76,546			104	5,627
Utilities	221xxx						
Information		2,960	60,475	3	144	90	3,729
Information	51xxxx	2,960	60,475	3	144	90	3,729
Publishing Industries	511xxx						
Motion Picture & Sound Recording	512xxx						
Broadcasting (except Internet)	515xxx						
Internet Publishing and Broadcasting	516xxx						
Telecommunications	517xxx						
ISPs, Search Portals, & Data Processing	518xxx						
Other Information Services	519xxx						
Financial activities		16,703	174,266	2	271	40	362
Finance and insurance	52xxxx	10,062	136,998	2	271	6	45
Insurance Carriers & Related Activities	524xxx						
Real estate and rental and leasing	53xxxx	6,642	37,267			34	317
Real Estate	531xxx						
Rental and Leasing Services	532xxx						
Lessors, Nonfinancial Intangible Assets	533xxx						
Professional and business services		24,866	293,797	54	1,017	67	1,477
Professional, scientific and technical services	54xxxx	16,504	117,704	2	0	19	409
Professional and Technical Services	541xxx						
Management of companies and enterprises	55xxxx	874	59,452				
Management of Companies and Enterprises	551xxx						
Administrative and support and waste management and remediation services	56xxxx	7,488	116,641	52	1,017	48	1,068
Administrative and Support Services	561xxx						
Waste Management and Remediation Service	562xxx						
Education and health services		12,584	351,198	151	38,024	2,269	154,091
Education services	61xxxx	1,532	33,632	73	33,279	2,103	128,624
Educational Services	611xxx						

Industry		Private ownership		State government		Local government	
Supersector, sector and subsector	NAICS codes	Average number of establish-ments	Average number of employees	Average number of establish-ments	Average number of employees	Average number of establish-ments	Average number of employees
Health care and social assistance	62xxxx	11,052	317,566	78	4,745	166	25,466
Ambulatory Health Care Services	621xxx						
Hospitals	622xxx						
Nursing and Residential Care facilities	623xxx						
Social Assistance	624xxx						
Leisure and hospitality		13,159	231,807	31	392	88	16,310
Arts, entertainment and recreation	71xxxx	2,563	36,478	31	392	61	10,869
Performing Arts and Spectator Sports	711xxx						
Museums, Parks and Historical sites	712xxx						
Amusement, gambling & recreation industries	713xxx						
Accomodation and food services	72xxxx	10,597	195,329			27	5,441
Accommodation	721xxx						
Food Services and Drinking Places	722xxx						
Other services, except public administration		13,070	87,464	10	21	13	65
Other services, except public administration	81xxxx	13,070	87,464	10	21	13	65
Repair and Maintenance	811xxx						
Personal and Laundry services	812xxx						
Membership Organizations & associations	813xxx						
Private Households	814xxx						
Public administration				1,137	25,153	1,836	79,829
Public administration	92xxxx			1,137	25,153	1,836	79,829
Executive, Legislative, & Gen Government	921xxx						
Justice, Public Order, and Safety Activities	922xxx						
Administration of Human Resource Program	923xxx						
Administration of Environmental Programs	924xxx						
Community and Housing Program Admin	925xxx						
Administration of Economic Programs	926xxx						
National Security & International Affairs	928xxx						

1. Establishments and employment are annual averages for 2003 from the Quarterly Census of Employment and Wages conducted by the Minnesota Department of Employment and Economic Development. Federal government establishments and employment have been excluded.

Appendix C

Definitions of key concepts in the BLS *Survey of Occupational Injuries and Illnesses*

The U.S. Bureau of Labor Statistics conducts the annual *Survey of Occupational Injuries and Illnesses* to provide nationwide and state-level information about work-related injuries and illnesses, including their number and incidence.[21] The survey includes all nonfatal cases recorded by participating employers on their OSHA 300 logs. Injuries and illnesses logged by employers conform with definitions and recordkeeping guidelines set by the Occupational Safety and Health Administration.

Work-related injuries and illnesses are events or exposures in the work environment that caused or contributed to the condition or significantly aggravated a pre-existing condition.

Recordable cases, for 2002 and later years, include work-related injuries and illnesses that result in:

- death;
- loss of consciousness;
- days away from work;
- restricted work activity or job transfer;
- medical treatment (beyond first aid); or
- significant work related injuries or illnesses that are diagnosed by a physician or other licensed health care professional. These include any work-related case involving cancer, chronic irreversible disease, a fracture or cracked bone, or a punctured eardrum.

Additional criteria that can result in a recordable case include:

- any needlestick injury or cut from a sharp object that is contaminated with another person's blood or other potentially infectious material;
- any case requiring an employee to be medically removed under the requirements of an OSHA health standard;
- tuberculosis infection as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional after exposure to a known case of active tuberculosis.

Some of the differences between recordable cases for 2002 and for previous years are discussed in Appendix A. Information about the recordkeeping guidelines is available at www.doli.state.mn.us/recordkeeping.html.

Occupational injury is any wound or damage to the body resulting from an event in the work environment.

Occupational illness is any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or diseases that may be caused by inhalation, absorption, ingestion or direct contact.

For injuries prior to 2002, the following definitions apply:

Days away from work are days after the injury or onset of illness when the employee would have worked but does not because of the injury or illness.

Days of restricted work activity are days after the injury or onset of illness when the employee works reduced hours, has restricted duties or is temporarily assigned to another job because of the injury or illness.

Lost workday (LWD) cases are cases that involve days away from work, days of restricted work activity, or both.

1. *Lost workday cases involving days away from work* (DAFW cases) are cases that result in days away from work or a combination of days away from work and days of restricted work activity.

[21] The survey and other BLS occupational safety and health statistics are described in greater detail in Chapter 9 of the *BLS Handbook of Methods*, at www.bls.gov/opub/hom/homtoc.htm.

2. *Lost workday cases involving restricted work activity* are cases that result in restricted work activity only.

Cases without lost workdays are recordable cases with no days away from work or days with restricted work activity.

For injuries in 2002, the following definitions apply:

Days away from work, days of restricted work activity or job transfer (DART) are cases that involve days away from work, or days of restricted work activity or job transfer, or both.

1. *Cases involving days away from work* (DAFW) are cases requiring at least one day away from work with or without days of job restriction.

2. *Job transfer or restriction cases* occur when, as a result of a work-related injury or illness, an employer or health care professional keeps or recommends keeping an employee from doing the routine functions of his or her job or from working the full workday the employee would have been scheduled to work before the injury or illness occurred.

Other recordable cases are recordable cases that do not involve death, days away from work, or days of restricted work activity or job transfer.

For all survey years, the following definitions apply:

Publishable industry data are summary data about an industry selected for publication in the survey that meet the BLS reliability and confidentiality criteria. As part of the survey sample selection process, states decide which industries will include enough surveyed companies to provide potentially publishable data. The remaining industries are grouped into residual industries that provide data for the next-higher level of categorization.

The reliability criteria consider changes in an industry's employment during the survey period, the relative standard error for the number of lost workday cases and whether there is a minimum level of employment in that industry. The confidentiality criteria are used to ensure the identity of data providers and the nature of their data cannot be determined. Industries must have more than six employees and three employers; there must be at least one reported case; one company cannot contribute more than 60 percent of employment or report more than 90 percent of the cases; and the total recordable case rate must be at least 0.05.

Median days away from work is the measure used to summarize the varying lengths of absences from work among the cases with days away from work. The median is the halfway point in the distribution: half the cases involved more days and half involved fewer days.

Incidence rates represent the number of injuries and illnesses per 100 full-time equivalent workers. They are calculated as: (N/EH) x 200,000 where:

N = number of injuries and illnesses;
EH = total hours worked by all employees during the calendar year;
200,000 = base for 100 full-time-equivalent workers (working 40 hours a week, 50 weeks a year).

Nature of injury or illness names the principal physical characteristic of a disabling condition, such as sprain/strain, cut/laceration or carpal tunnel syndrome.

Part of body affected is directly linked to the nature of the injury or illness cited, for example, back sprain, finger cut, or wrist and carpal tunnel syndrome.

Event or exposure signifies the manner in which the injury or illness was produced or inflicted, for example, overexertion while lifting or fall from ladder.

Source of injury or illness is the object, substance, exposure or bodily motion that directly produced or inflicted the disabling condition cited. Examples are a heavy box, a toxic substance, fire/flame and bodily motion of the injured worker.

Appendix D

Incidence rates and numbers from the BLS *Survey of Occupational Injuries and Illnesses*

Nonfatal occupational injuries and illnesses by industry, Minnesota, 2003

Industry[2]	NAICS code[3]	2003 Average annual employment[4] (000's)	Rate of total recordable cases[1]	Number of total recordable cases
All industries including state and local government[6]		2,539.8	5.5	111.6
Private industry[6]		2,199.5	5.5	97.7
Goods producing[6]		490.6	7.9	35.8
Natural resources and mining[6]		16.6	7.1	1.1
Agriculture, forestry, fishing and hunting[6]	11	15.9	8.8	0.9
Crop production[6]	111	5.9	6.8	0.2
Animal production[6]	112	7.4	12.5	0.6
Mining[7]	21	5.2	3.6	0.2
Metal ore mining[8]	2122	3.6	3.0	0.1
Construction		124.7	9.3	9.7
Construction	23	124.7	9.3	9.7
Construction of buildings	236	29.7	9.6	2.4
Residential building construction	2361	16.7	9.8	1.2
Nonresidential building construction	2362	13.0	9.4	1.2
Heavy and civil engineering construction	237	15.0	8.1	1.1
Highway, street, and bridge construction	2373	6.6	8.6	0.6
Specialty trade contractors	238	80.0	9.4	6.2
Foundation, structure, and building exterior contractors	2381	19.2	12.5	1.8
Building equipment contractors	2382	35.6	9.3	2.9
Electrical contractors	23821	15.5	9.8	1.4
Plumbing, heating, and air-conditioning contractors	23822	17.7	9.5	1.5
Other building equipment contractors	23829	2.4	4.3	0.1
Building finishing contractors	2383	15.8	8.5	1.0
Other specialty trade contractors	2389	9.4	5.4	0.4
Manufacturing		344.7	7.5	25.0
Manufacturing	31-33	344.7	7.5	25.0
Food manufacturing	311	46.1	8.6	3.9
Fruit and vegetable preserving and specialty food manufacturing	3114	5.2	7.4	0.4
Dairy product manufacturing	3115	7.0	6.9	0.5
Animal slaughtering and processing	3116	16.0	11.6	1.9
Animal slaughtering and processing	31161	16.0	11.6	1.9
Animal (except poultry) slaughtering	311611	4.8	15.5	0.8
Meat processed from carcasses	311612	4.7	7.3	0.4
Wood product manufacturing	321	16.7	12.7	2.0
Other wood product manufacturing	3219	12.8	12.9	1.5
Millwork	32191	9.7	12.3	1.1
Paper manufacturing	322	13.2	5.3	0.7
Pulp, paper, and paperboard mills	3221	3.6	4.9	0.2
Paper mills	32212	3.4	4.9	0.2

Industry[2]	NAICS code[3]	2003 Average annual employment[4] (000's)	Rate of total recordable cases[1]	Number of total recordable cases
Converted paper product manufacturing	3222	9.6	5.5	0.5
Paperboard container manufacturing	32221	4.5	4.5	0.2
Printing and related support activities	323	30.8	6.7	2.0
Chemical manufacturing	325	9.8	6.1	0.6
Plastics and rubber products manufacturing	326	17.0	6.7	1.1
Plastics product manufacturing	3261	15.2	6.6	1.0
Nonmetallic mineral product manufacturing	327	9.7	7.3	0.7
Primary metal manufacturing	331	6.4	12.8	0.8
Fabricated metal product manufacturing	332	40.5	8.2	3.2
Forging and stamping	3321	3.7	12.0	0.4
Architectural and structural metals manufacturing	3323	8.3	11.6	1.0
Other fabricated metal product manufacturing	3329	7.2	5.2	0.4
All other fabricated metal product manufacturing	33299	5.5	5.8	0.3
Machinery manufacturing	333	34.7	7.2	2.5
Agriculture, construction, and mining machinery manufacturing	3331	6.8	10.9	0.7
Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing	3334	5.5	7.8	0.4
Metalworking machinery manufacturing	3335	4.8	4.7	0.2
Other general purpose machinery manufacturing	3339	9.3	7.7	0.7
All other general purpose machinery manufacturing	33399	5.5	5.8	0.3
Computer and electronic product manufacturing	334	53.4	2.7	1.4
Computer and peripheral equipment manufacturing	3341	15.2	1.2	0.2
Semiconductor and other electronic component manufacturing	3344	10.7	4.9	0.5
Navigational, measuring, electromedical, and control instruments mfg.	3345	23.1	1.6	0.3
Electrical equipment, appliance, and component manufacturing	335	7.6	4.8	0.3
Electrical equipment manufacturing	3353	3.7	3.6	0.1
Transportation equipment manufacturing	336	16.2	17.3	2.7
Motor vehicle manufacturing	3361	3.0	37.5	1.1
Motor vehicle parts manufacturing	3363	3.4	13.1	0.4
Furniture and related product manufacturing	337	12.4	8.5	1.0
Miscellaneous manufacturing	339	19.5	5.7	1.0
Medical equipment and supplies manufacturing	3391	13.4	4.4	0.6
Other miscellaneous manufacturing	3399	6.1	9.1	0.4
Service providing[9]		1708.9	4.7	61.9
Trade, transportation, and utilities[9]		517.5	5.9	24.7
Wholesale trade	42	129.4	5.2	6.5
Merchant wholesalers, durable goods	423	62.5	5.5	3.3
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	4231	7.6	8.2	0.5
Lumber and other construction materials merchant wholesalers	4233	5.4	12.2	0.7
Professional and commercial equipment and supplies merchant wholesalers	4234	14.3	2.5	0.3
Machinery, equipment, and supplies merchant wholesalers	4238	14.7	6.0	0.8
Merchant wholesalers, nondurable goods	424	44.4	6.3	2.7
Grocery and related product merchant wholesalers	4244	14.5	--	--
Wholesale electronic markets and agents and brokers	425	22.6	2.4	0.5
Retail trade	44-45	300.9	5.9	12.7
Motor vehicle and parts dealers	441	35.2	6.5	2.0
Furniture and home furnishings stores	442	11.6	6.0	0.5
Electronics and appliance stores	443	8.8	6.2	0.5
Building material and garden equipment and supplies dealers	444	26.8	6.8	1.5
Food and beverage stores	445	53.1	6.1	2.2
Grocery stores	4451	45.5	6.4	2.0
Health and personal care stores	446	14.6	1.5	0.1
Gasoline stations	447	25.8	5.9	1.1
Clothing and clothing accessories stores	448	20.6	2.7	0.3
Sporting goods, hobby, book, and music stores	451	14.4	2.8	0.3
General merchandise stores	452	58.8	8.1	3.2
Department stores	4521	45.5	8.5	2.5
Miscellaneous store retailers	453	20.6	3.7	0.5
Nonstore retailers	454	10.5	5.7	0.5

Industry[2]	NAICS code[3]	2003 Average annual employment[4] (000's)	Rate of total recordable cases[1]	Number of total recordable cases
Transportation and warehousing[9]	48-49	75.2	7.4	5.0
Air transportation	481	17.5	9.5	1.5
Rail transportation[9]	482	--	2.8	0.1
Truck transportation	484	22.3	5.3	1.1
Transit and ground passenger transportation	485	11.4	6.4	0.5
Support activities for transportation	488	5.6	2.9	0.1
Couriers and messengers	492	10.6	13.6	1.1
Warehousing and storage	493	7.0	9.8	0.6
Utilities	22	11.9	4.6	0.5
Utilities	221	11.9	4.6	0.5
Electric power generation, transmission and distribution	2211	9.9	4.8	0.5
Information		60.5	2.2	1.2
Information	51	60.5	2.2	1.2
Publishing industries (except Internet)	511	24.6	2.5	0.6
Motion picture and sound recording industries	512	5.2	1.0	([9])
Telecommunications	517	15.5	2.5	0.4
Financial activities		174.0	1.6	2.5
Finance and insurance	52	136.8	1.2	1.6
Real estate and rental and leasing	53	37.2	3.3	0.9
Real estate	531	25.8	2.8	0.5
Rental and leasing services	532	10.2	3.9	0.3
Professional and business services		293.7	2.8	7.1
Professional, scientific, and technical services	54	117.6	1.6	1.7
Management of companies and enterprises	55	59.6	1.8	1.0
Administrative, support, waste management, remediation services	56	116.5	4.7	4.4
Education and health services		351.0	6.8	17.7
Educational services	61	33.6	2.4	0.6
Health care and social assistance	62	317.3	7.3	17.0
Ambulatory health care services	621	104.1	4.4	3.6
Home health care services	6216	10.3	8.3	0.4
Hospitals	622	80.7	9.8	5.7
Nursing and residential care facilities	623	83.6	10.5	6.1
Social assistance	624	48.9	4.9	1.7
Leisure and hospitality		231.8	5.2	6.6
Arts, entertainment, and recreation	71	36.5	6.3	1.3
Performing arts, spectator sports, and related industries	711	7.6	9.0	0.4
Amusement, gambling, and recreation industries	713	26.6	5.7	0.8
Accommodation and food services	72	195.3	5.0	5.3
Accommodation	721	26.9	6.1	1.0
Traveler accommodation	7211	25.6	6.1	0.9
Food services and drinking places	722	168.4	4.8	4.3

Industry[2]	NAICS code[3]	2003 Average annual employment[4] (000's)	Rate of total recordable cases[1]	Number of total recordable cases
Other services		85.1	3.5	2.1
Other services, except public administration	81	85.1	3.5	2.1
Repair and maintenance	811	22.6	4.8	0.9
Automotive repair and maintenance	8111	16.4	4.8	0.7
State and local government		335.8	5.3	13.9
State government		68.9	3.5	2.2
Service providing[9]		65.1	3.3	1.9
Education and health services		38.0	3.7	1.4
Educational services	61	33.3	2.9	1.0
Health care and social assistance	62	4.7	11.3	0.4
Hospitals	622	2.7	7.4	0.2
Public administration		25.2	2.3	0.5
Local government		266.9	5.8	11.8
Goods producing[6]		3.7	8.7	0.3
Service providing[9]		263.3	5.8	11.5
Education and health services		154.1	5.3	5.7
Educational services	61	128.6	4.4	3.9
Educational services	611	128.6	4.4	3.9
Elementary and secondary schools	6111	126.8	4.4	3.8
Health care and social assistance	62	25.5	9.8	1.8
Hospitals	622	17.5	9.6	1.2
Nursing and residential care facilities	623	4.5	17.7	0.5
Public administration		79.8	6.6	4.4

[1] Incidence rates represent the number of injuries and illnesses per 100 full-time workers were calculated as: (N/EH) x 200,000 where

N	= number of injuries and illnesses
EH	= total hours worked by all employees during the calendar year
200,000	= base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

[2] Totals include data for industries not shown separately.

[3] *North American Industry Classification System* Manual, 2002 Edition

[4] Employment is expressed as an annual average and is derived primarily from the BLS-State Quarterly Census of Employment and

[6] Excludes farms with fewer than 11 employees.

[7] Data for mining (Sector 21 in the North American Industry Classification System, 2002 edition) include establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in oil and gas extraction and related support activities. Data for mining operators in coal, metal, and nonmetal mining are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries. These data do not reflect the changes OSHA made to its recordkeeping requirements effective January 1, 2002; therefore estimates for these industries are not comparable to estimates in other industries.

[8] Data for mining operators in this industry are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor. Independent mining contractors are excluded. These data do not reflect the changes OSHA made to its recordkeeping requirements effective January 1, 2002; therefore estimates for these industries are not comparable to estimates in other industries.

[9] Data for employers in rail transportation are provided to BLS by the Federal Railroad Administration, U.S. Department of Transportation. These data do not reflect the changes OSHA made to its recordkeeping requirements effective January 1, 2002; therefore estimates for these industries are not comparable to estimates in other industries.

[10] Incidence rate less than 0.05.

[11] Fewer than 15 cases.

NOTE: Because of rounding, components may not add to totals.
-- Indicates data not available.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with the Minnesota Department of Labor and Industry.